ENDANGERED SPECIES ACT OVERSIGHT

HEARINGS

BEFORE THE

SUBCOMMITTEE ON ENVIRONMENTAL POLLUTION

OF THE

COMMITTEE ON
ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

NINETY-SEVENTH CONGRESS
FIRST SESSION

DECEMBER 8 AND 10, 1981

SERIAL NO. 97-H34

Printed for the use of the Committee on Environment and Public Works

U.S. GOVERNMENT PRINTING OFFICE
90-806 O WASHINGTON : 1982

S321-18

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ENDANGERED SPECIES ACT OVERSIGHT

TUESDAY, DECEMBER 8, 1981

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
SUBCOMMITTEE ON ENVIRONMENTAL POLLUTION,
Washington, D.C.

The subcommittee met, at 9:45 a.m., in room 4200, Dirksen Senate Office Building, Hon. John H. Chafee (chairman) presiding.

Present: Senators Chafee, Gorton, and Mitchell.

OPENING STATEMENT OF HON. JOHN H. CHAFEE, U.S. SENATOR FROM THE STATE OF RHODE ISLAND

Senator CHAFEE. Good morning everyone.

As most of you know, appropriations for the Endangered Species Act of 1973 must be reauthorized by October 1, 1982. To begin the reauthorization process, we scheduled these oversight hearings to examine how the act is being implemented, where the act is working well, where problems have arisen, and what, if any, legislative changes are needed.

The act is a far-reaching one that affects many people. As with any regulatory law, some people feel that the law goes too far. Others feel that it does not go far enough. Criticism from both sides of the spectrum is, on occasion, a pretty good indication you are right where you ought to be.

Those of you with reasonable concerns and problems with the act, as written or as implemented, have an opportunity to be heard, and we will do what we can.

I do ask that generalized statements be avoided as much as possible. In other words, avoid generalized statements regarding fear as to what the act can or cannot do, fear as to how the act may be used in any particular situation. This isn't a new piece of legislation. We are dealing with something that has been on the books since 1973. We have had more than 8 years of experience with it, and experience teaches us if and where changes in the law are needed. I do not find generalized statements of fear or hypothetical situations helpful in this instance.

So, if there are problems, let's document them. It is time we raised the level of the debate about this law to the arena of facts and intellectually honest discussion. Too often, in my judgment, the debate has centered around arguments based on emotionalism or undocumented fear.

Also, we need specific suggestions. Statements such as "Add flexibility to the listing process" aren't very helpful. We will be drafting a reauthorization bill after these hearings. This is the opportunity for those who are being heard or wish to be heard to affect that process.

For those of you who do not have specifics with you today, I urge you to get them to us by January 8. The administration, because of the multiagency review process they must go through, has until January 20. We need these suggestions in time to draft a bill that will be introduced when we return at the end of January. This timetable will give each of you time to review and analyze the bill prior to hearings that will follow introduction of the legislation. At those hearings you can tell us what a fine job we did or, in case that isn't quite the way you feel, you have an opportunity to suggest how we haven't been as successful as we might have been.

The importance of the Endangered Species Act and the need for timely reauthorization is beyond dispute. At the November 16, 1981, Strategy Conference on Biological Diversity convened by the State Department, it was noted by James L. Buckley, who I am pleased to note was a former member of this committee and is now Under Secretary of State for Security Assistance, Science and Technology, that, "the needless extinction of a single species can be an act of recklessness. . . . By permitting high rates of extinction to continue, we are limiting the potential growth of biological knowledge. In essence," said Secretary Buckley, "the process is tantamount to bookburning; but it is even worse in that it involves books yet to be deciphered and read." In his opening speech to the conference, Buckley also argued that, "We need to impress upon public consciousness that extinction is an act of awesome finality." And that really is a very accurate statement, extinction is an act of awesome finality. It is final and forever.

I look forward to the testimony of our distinguished witnesses. We are delighted to have Mr. Robert Jantzen testifying here today as a member of the panel. Mr. Jantzen is, of course, the Director of the U.S. Fish and Wildlife Service. And I believe, Mr. Jantzen, outside of your confirmation hearings this is the first time you have been here testifying on a piece of legislation.

Mr. **Jantzen**. Mr. Chairman, that is correct. This is my maiden voyage.

Senator **Chafee**. Great. We are delighted you are here, and we are pleased you are in that position, and Mr. William Stevenson, Deputy Assistant Administrator for Fisheries in the National Marine Fisheries Service of the Department of Commerce, and Mrs. Carol Dinkins, Assistant Attorney General in the Land and Natural Resources Division of the Department of Justice.

Why don't we proceed in that order. Mr. Jantzen, why don't you lead off?

STATEMENTS OF ROBERT JANTZEN, DIRECTOR, U.S. FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR; WILLIAM H. STEVENSON, DEPUTY ASSISTANT ADMINISTRATOR FOR FISHERIES, NATIONAL MARINE FISHERIES SERVICE, DEPARTMENT OF COMMERCE; AND CAROL DINKINS, ASSISTANT ATTORNEY GENERAL, LAND AND NATURAL RESOURCES DIVISION, DEPARTMENT OF JUSTICE

Mr. **Jantzen**. Thank you, Mr. Chairman.

I have provided a copy of my testimony for the record, and if I could I would like to summarize, starting about midway through that testimony.

Senator **Chafee**. Sure.

Mr. **Jantzen**. Mr. Chairman, last June we began an effort to collect information concerning the implementation of the act in preparation for congressional consideration of reauthorization legislation. In August, Vice President Bush announced the second list of existing regulations to be reviewed pursuant to the regulatory reform effort being undertaken under section 3(i) of Executive Order 12291. This list included the Endangered Species Act. Accordingly, the decision was made to combine the reauthorization preparation and regulatory review into one effort.

On September 18, 1981, the Service published in the Federal Register a notice requesting comments on the act. Letters transmitting this notice and copies of the Executive order were sent to Federal agencies, State fish and game agencies, and private organizations. We also met with industry groups, environmental groups, and congressional staffs to identify and discuss issues.

The comment period closed on October 17, 1981. We have summarized all the comments received in response to the Federal Register notice as of November 27, 1981. A summary of those comments will be provided for the record. (See p. 83.)

While we were gathering public comments, we also requested the assistance of the regional offices of the Fish and Wildlife Service in gathering data and statistics on how various sections of the act have been functioning.

Based on the comments that we received, priority issues have been identified and a listing of these appears in a press release dated November 10, 1981. Issues assigned a lower priority included those issues which are less significant and can be resolved through policy changes and others which were simply information-gathering topics to prepare us better for questioning during upcoming reauthorization hearings.

Since we are still in the analysis stage of our review, I am not prepared at this time to offer specific recommendations or options concerning the need for amendments to the act. I would, however, like to identify for you several major issues which we are reviewing.

The first is whether it is desirable to continue to designate critical habitat.

The concept of critical habitat has often been perceived by the public as tantamount to the designation of an inviolate preserve, which would forbid or curtail all human activities in the designated area. Because of this perception, there has often been strong resistance to the designation of critical habitat by local residents and commercial interests. In response to this concern, Congress in 1978 required that an analysis be performed prior to the listing of critical habitat to determine the economic impact of the designation. As a result of public resistance and the analysis requirements of the 1978 amendments, critical habitat designation has added significantly to the complexity of the listing process.

Some commentors felt that due to these problems critical habitat should be eliminated; others felt that it should be retained. Thus, one of the issues that we will be considering as a result of the comments is whether there should be a different method of protecting habitat needed for critical life stages, such as nesting habitat for sea turtles or migratory birds, while at the same time alerting Federal agencies and the public to the existence of this habitat.

A second issue which we are examining concerns whether economic considerations should be addressed in the listing of species. A number of comments that we received expressed the view that a balance between economic and biological needs should be applied to the listing of species. Others disagreed and felt that economics should not be applied at all to listing, or that it should be applied only during the exemption process.

Another issue upon which we received comments was the exemption process itself. Some expressed the view that the current process is too time consuming. Others felt that the process should not be changed inasmuch as it has never been used. We are currently looking at the exemption process to determine if changes are warranted.

A fourth issue which we are reviewing is whether there should be a procedure under the act for listing a special category of experimental populations of fish, wildlife, and plants. One of the most effective means for achieving the recovery of a species is through reintroduction into its historical range. The whooping crane is one outstanding example. Reintroduction is also one of the most difficult recovery tasks to implement, however. Several States expressed concern that since the act does not treat experimental populations differently than wild populations, State wildlife and land management options available in an area where reintroduction has occurred would be altered or eliminated. The concern has also been expressed that the Service may use reintroduction to declare critical habitat and remove State management prerogatives. Consequently, some States are reluctant to approve reintroduction. Thus, we are reviewing suggestions for an "experimental" category for reintroduction of listed species.

Another issue that is of great concern to the States is the effect of CITES on their fish and wildlife management programs, as exemplified in the bobcat situation. As you know, Mr. Chairman, the bobcat, lynx, and river otter were included under appendix II of CITES under broad listings of entire families of species. Therefore, although these animals are not listed as threatened or endangered in this country, CITES requires the Scientific Authority to issue a "no detriment" finding before they can be exported. Originally the Scientific Authority felt that there was insufficient data to make a finding and proposed a complete ban, but later agreed to permit exportation on a quota basis. Subsequently, it was decided that if a State had developed an adequate management program for these species, export would be allowed without limit.

At least from a philosophical standpoint, this decision, especially with regard to the bobcat, is unacceptable to many States, who feel that the Federal Government is interfering with their management prerogative for resident species. This was particularly true since most States felt that the bobcat should not be listed under CITES at all. On the other hand, some conservation groups feel that the Federal Government has not done enough under CITES to protect bobcat populations. Defenders of Wildlife has sued the Department to invalidate the Scientific Authority's findings on bobcat exports. The district court placed an injunction on exports for this harvest year until the Scientific Authority can show that it is basing findings on reliable population estimates. The matter is presently pending before the court. Thus, the effect of CITES on States' management programs is another issue we will be examining.

In addition to addressing concerns raised by the public, we will be examining the general implementation of the act by the Service and the National Marine Fisheries Service in order to insure that our procedures are consistent.

We feel these issues and others that have been raised warrant further examination. Accordingly, the Service is preparing an analysis of the comments received and will evaluate a full spectrum of options for addressing these comments. Those options will range from no change, to policy revision, to regulatory revision, to statutory change. Data were gathered in order to fairly evaluate the pros and cons of each option. Policy decisions on these issues have not yet been made within the Department. When these decisions are made, care will be taken to give primary consideration to the resource, to be responsive to the public comment where possible, and to always evaluate the factual record. Ultimately, the Department's recommendations will be forwarded to OMB for review within the administration.

Mr. Chairman, according to our current schedule, the administration should be prepared to make recommendations to Congress concerning the need for statutory changes in the act by early next year. I look forward to having the opportunity to come back at that time and discuss our recommendations fully with you.

Mr. Chairman, that is the end of my summary. I have with me today Dr. Hester, who is the Deputy Director of the Fish and Wildlife Service, and Mr. Ron Lambertson, who is the program manager for this particular program, to help answer specific questions that you might have.

Senator CHAFEE. Thank you very much, Mr. Jantzen. My thought would be to go through the panel and then we can address questions to the panel.

Two of our distinguished members of this subcommittee have just arrived. If you, Senator Gorton or Senator Mitchell, have an opening statement, we would be glad to hear it.

Senator GORTON. No opening statement.

Senator MITCHELL. No opening statement.

Senator CHAFEE. Therefore, it would be my suggestion to proceed with Mr. Stevenson and Mrs. Dinkins, and then we will come back and ask questions.

STATEMENT OF WILLIAM H. STEVENSON

Mr. STEVENSON. Thank you, Mr. Chairman. Good morning.

For the sake of brevity, Mr. Chairman, we have supplied a copy of my testimony to the committee and, with your permission, I would prefer to just summarize the issues that we have raised in the testimony rather than going through all of the activities that the Department of Commerce has taken in implementing the Endangered Species Act for the past couple of years.

Senator **Chafee**. That will be fine. If you are on a certain page in your summary, it will be helpful if you would refer us to that page.

Mr. **Stevenson**. I would suggest, Mr. Chairman, we go to page 15 and just discuss the issues.

The issues that we feel need to be considered are the use of section 7 and section 9 and a relationship between these two sections.

Under the Department of Commerce's interpretation of the existing provisions of the Endangered Species Act, Federal agencies receiving "no jeopardy" biological opinions from either the National Marine Fisheries Service or the Fish and Wildlife Service under section 7 may remain subject to the taking prohibitions of section 9. Consequently, a Federal agency or an individual receiving Federal authorization could face civil or criminal liability for any takings of listed species incidental to the Federal or federally authorized action, even though a "no jeopardy" biological opinion on the agency action was issued. Although the National Marine Fisheries Service rarely has been involved in a section 7 or 9 conflict situations, the problem may occur in federally authorized activities such as Outer Continental Shelf oil and gas development and navigation channel dredging. The National Marine Fisheries Service is examining this issue to determine the most appropriate resolution to the problem.

Senator **Chafee**. On that particular point, Mr. Stevenson, because I am afraid we will lose it, is that a theoretical problem or actual problem? For instance, you say it has never arisen. Can Mr. Jantzen or one of your assistants respond? Has it ever arisen with you? This seems to fall into the category of hypotheticals I was discussing in my opening statement. We really don't want to spend too much time with "what ifs"—we have had this act for 8 years now. We have a long worry list, and I don't think we want to add things that don't happen to that worry list.

Mr. **Lambertson**. Mr. Chairman, I am Ron Lambertson.

It has happened in a theoretical context. Somebody says "what if." Our response has been if someone complies with section 7, there is no problem. We have asked our Solicitor's Office for an opinion, and I believe we have a draft opinion that has now been prepared which, in our view, it resolves this issue.

Senator **Chafee**. All right, fine.

I am not shooting you down, Mr. Stevenson, but we have so many real problems. Let us keep our attention focused on those as much as possible.

Mr. **Stevenson**. I would like to call your attention, Mr. Chairman, to a problem that we have had in the Cape Canaveral Channel in dealing with the Corps of Engineers on a corps permit for dredging in which a "no jeopardy" opinion was given on that dredging. Soon after the dredging was initiated, sea turtles were taken. The dredging operations were halted temporarily while the corps and NMFS discussed ways to minimize sea turtle injury and mortality such as sweeping the channel ahead of the dredging operation to remove sea turtles from the path of the dredge. After conducting a thorough review of the case to determine whether prosecution under section 9 was warranted, NMFS determined that in light of the corps cooperation, and the extensive measures adopted by the corps to protect the threatened turtles, that prosecution would not serve the purposes of the act. So, although this issue has rarely arisen up to this circumstances for it to take place do exist, and we are attempting to address this problem administratively.

Senator **Chafee**. Mrs. Dinkins, maybe you could address that situation when you give your testimony.

Mrs. **Dinkins**. Yes, sir, I would be glad to.

Senator **Chafee**. Go ahead, Mr. Stevenson.

Mr. **Stevenson**. In the section 7 regulations, on page 16, section 7 of the act was amended in 1978 and 1979 but the regulations implementing those amendments have not been promulgated. We worked, and are continuing to work, with the Fish and Wildlife Service to develop draft regulations, which are reviewed by other Federal agencies and modified several times to streamline the consultation process and to eliminate overly burdensome requirements. Although both the National Marine Fisheries Service and the Fish and Wildlife Service have used the draft regulations for guidance, the lack of enforceable regulations has caused confusion and misunderstandings about the role and responsibilities of Federal agencies under section 7 of the act. Federal agencies must understand and participate fully in the consultation process for the process to be effective. The National Marine Fisheries Service believes that any new regulations that are promulgated must provide other Federal agencies with the appropriate guidance for meeting their responsibilities under section 7 of the act, and must provide sufficient guidance to enable Federal agencies to consult with the Services so as to avoid most conflict between the conservation of endangered and threatened species and the proposed actions of Federal agencies.

To summarize, I believe that the Endangered Species Act has worked well with respect to marine species. Although some issues remain, generally we expect to resolve these issues administratively. The need for further regulatory and statutory changes now is under review within the administration, as my colleagues from the Fish and Wildlife Service have indicated, and we will inform the Congress of the results of the review upon its completion.

Mr. Chairman, this concludes my summary of the Department's formal statement. I thank you. I would like to take this opportunity to introduce Mr. Richard Roe, who is the Acting Director of the Office of Marine Mammals and Endangered Species, who I have brought along.

Senator **Chafee**. Mr. Roe, we are delighted you are here.

Mrs. Dinkins, please proceed.

STATEMENT OF CAROL E. DINKINS

Mrs. **Dinkins**. Thank you, Mr. Chairman.

The Land and Natural Resources Division in the Department of Justice is very interested in assuring that we have an effective enforcement program under the Endangered Species Act. Since we created, 2 years ago, the Wildlife and Marine Resources Section within the division, we have prosecuted about 70 Endangered Species Act cases. We have been involved in 140 forfeiture cases, and we have defended 13 major cases under the act.

We are very interested in assuring that effective law enforcement continues under the Endangered Species Act. There are a number of issues that we are giving attention to within the Justice Department, and when we have concluded that review and finalized certain recommendations, we will communicate those to the subcommittee.

One of the things that we are interested in, in particular, is the area of criminal penalties under the Endangered Species Act. We supported revisions to the Lacey Act which were recently passed because we are concerned about large-scale smuggling and trafficking in endangered species.

Senator **Chafee**. We want to give our thanks to the Justice Department for their support on that. I was thrilled that it went sailing through the House and the President signed it. It is probably too early for any efforts to have been undertaken under the new act.

Mrs. **Dinkins**. Yes, sir, it just was signed very recently, but we did appreciate those amendments.

Under the current law, an Endangered Species Act violation may be punished as a felony under the Lacey Act amendments, or as a misdemeanor if we prosecute under the Endangered Species Act itself. It appears that the penalties for similar offenses and the deterrent effect to commercial violators are inconsistent under those two acts. So we are studying the interrelationship of the penalty provisions, and we may recommend specific amendments at a later date.

Another area where we have been concerned is with regard to the injunctive authority of the Attorney General. Private citizens, under section 11, have injunctive capability but the Attorney General is not specifically provided Federal enforcement authority by injunction. We believe that if an injunction were available, that we could resolve conflicts between a potential project and a species before the harm occurred, rather than relying on prosecution for a violation after the species has been damaged.

We have been studying the citizen suit provision and want to mention that. Under section 11(g), private parties may sue to enjoin any violation of the act. The scope of relief thus is very broad. Citizen suit provisions in other environmental statutes generally limit private enforcement rights to enjoining violations of specific statutory prohibitions. We are reviewing the citizen suit provisions under the Endangered Species Act in reference to other environmental laws, and we may also make specific recommendations for amendments at a later date.

I am concerned as well about the broad authority of the courts to award attorneys' fees to private plaintiffs under the citizen suit provision. These fees are potentially available to any party, without regard to whether the party has prevailed in the litigation.

We have several other matters of concern with regard to enforcement. One involves the preemption of State regulation of threatened or endangered species. The degree to which a State may regulate endangered species more stringently than the Federal Government is important to criminal enforcement under the Lacey Act.

We have a recent case in California which may also impact criminal enforcement of the act. The Department of the Interior has interpreted the act to allow regulation of resident or indigenous species. But the eastern district of California recently upheld against a constitutional challenge the validity of a California statute which regulates nonindigenous species. Some clarification may be proposed in the future.

There is ambiguity in enforcement under the grandfather clause of the act. We have argued that the act does not authorize commercial dealings in endangered species even if they were held noncommercially on December 28, 1973. The courts have taken conflicting views of that provision, and you may wish to consider clarification of the exemption.

With regard to the question that you raised about a conflict potential between section 7 and section 9, I think you might want to consider it in terms, first, of the Attorney General's enforcement powers and, second, as to what may happen under the citizen suit provision of the act. We are not prepared to recommend that a legislative solution is necessary. We believe that the Attorney General, through our Division, exercises prosecutorial discretion, and we believe if an appropriate and full section 7 consultation has been engaged in and if the parties have not violated the recommendations that were perhaps attached to a permit, for example, that there would not be any cause to prosecute, to bring any type of an action. There may be cases, of course, where we would decide to prosecute because somebody acted outside the scope of his authority. On the other hand, there may be potential for citizen suits under this part of the act. However, we have taken the position in the division, but we have never been called upon to take it in litigation, that a private litigant would not be able to show irreparable injury to a species on a set of facts that did involve a proper consultation.

We look forward to providing more specifics on things we may think need to be changed in the act, and I appreciate the chance to be with you today.

Senator CHAFEE. Thank you, each of you, very much. I would again request the various departments to get your recommendations to us by January 20 so that we can proceed with the drawing up of the reauthorization bill which will be introduced. We will then, obviously, have hearings on it. But we want to proceed with this rapidly in the next year.

Mr. Jantzen, I want to ask you a question dealing with your comments on the exemption committee. As I understood what you said, people don't go to the exemption committee. Has no one gone to the exemption committee since Grayrocks and Tellico? Are they the only situations that have gone to the exemption committee?

Mr. LAMBERTSON. Yes, Mr. Chairman. As you know, those two were mandated by Congress.

Senator CHAFEE. They were mandated under the law anyway.

Well, you can look at the facts two ways. You can look at it one way: It is so complicated people don't go there; or you can look at it and conclude that the consultation process is working and thus it is not necessary to go to the exemption committee. Which way do you want to look at it?

Mr. **Lambertson**. Mr. Chairman, I think there is a little of both there. I think the consultation process has been quite effective. There aren't that many irresolvable conflicts. But we are aware of a few situations where people did have an irresolvable conflict and did express the consultation process would not solve their problem in an adequate time frame.

Senator **Chafee**. Could you give me an illustration, to explain why somebody would throw in the towel and not go to the exemption committee?

Mr. **Lambertson**. One example could be a problem with timing. Because of financing requirements, a project may have to be undertaken within a certain time frame. The exemption process could take over a year to complete and people could feel that time frame is incompatible with their financing requirements.

Senator **Chafee**. Now, what about when we build this gas pipeline down from Alaska. Most of the route is going to follow the existing oil line and then branch off and go to Canada. Then they will follow the roadbed of the Al-Can Highway.

Mr. **Lambertson**. For the most part, we understand that is correct.

Senator **Chafee**. Could potential problems exist there? I suppose it is a possibility.

Mr. **Lambertson**. Any large project like that has the potential for problems, but we have been working very closely with the sponsors of projects like that to be sure they resolve any potential conflicts before they occur. We have been successful with informal consultation by working with the project sponsors to make sure problems don't become irresolveable conflicts.

Senator **Chafee**. How many listings do you have for critical habitat?

Mr. **Lambertson**. I don't have that exact figure with me. There aren't very many, though, Mr. Chairman.

[The following information was subsequently supplied:]

U.S. Department of the Interior,
Fish and Wildlife Service,
Washington, D.C., January 15, 1982.

In Reply Refer To: FWS/OES.

Hon. John H. Chafee,
Chairman, Subcommittee on Environmental Pollution of the Committee on Environment and Public Works, U.S. Senate, Washington, D.C.

Dear Mr. Chairman: In response to questions posed at the recent Endangered Species Oversight Hearings, we are pleased to provide the following information:

1. How many Critical Habitats have been listed since the enactment of the Endangered Species Act of 1973?

In the years 1975, 0; 1976, 6; 1977, 16; 1978, 8; 1979, 3; 1980, 14; and 1981, 3; for a total of 50.

2. What is the timing and taxonomic breakdown of species listed since enactment of the 1973 Act?

	1973[2]	1974	1975	1976	1977	1978	1979	1980	1981[1]	Total
Mammals	158	3	2	85	1	1	28	1	0	279
Birds	169	0	3	36	3	0	1	0	0	212
Fish	39	0	3	2	5	2	1	4	0	56
Reptiles	27	0	1	27	4	6	4	8	0	77
Amphibians	6	0	0	7	2	0	0	1	0	16
Insects	0	0	0	8	0	0	0	5	0	13

	1973 [2]	1974	1975	1976	1977	1978	1979	1980	1981 [1]	Total
Snails	1	0	0	0	0	7	0	0	1	9
Mussels	0	0	0	24	1	0	0	0	0	25
Others	0	0	0	0	0	1	0	0	0	1
Plants	0	0	0	0	4	18	36	2	3	63
Total	400	3	9	189	20	35	73	21	4	751

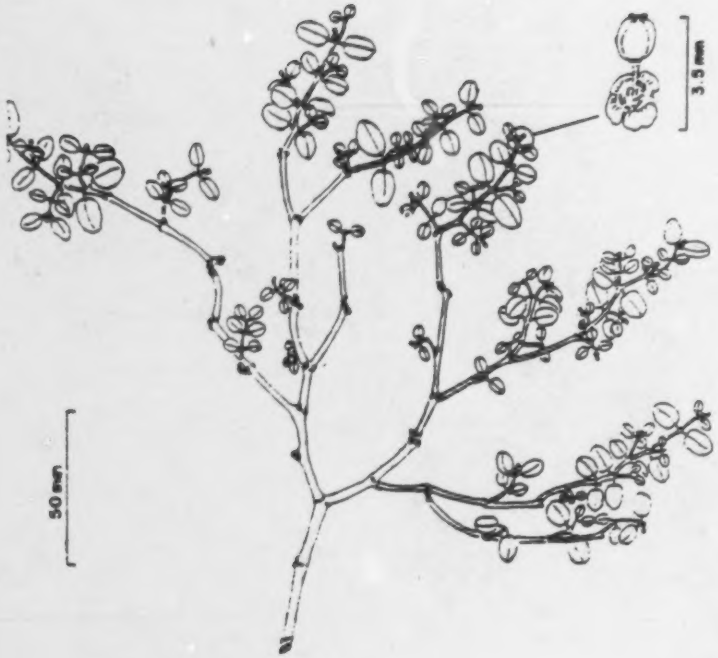
[1] The effective dates for four species listings took place after January 20, 1981.
[2] Species listed previous to the 1973 Act.

Please let us know if you wish any further information on these or other matters.

Sincerely yours,

ROBERT A. JANTZEN, *Director.*

Placing Animals and Plants on the List of Endangered and Threatened Species



As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

March 3, 1849

U.S.
FISH & WILDLIFE
SERVICE

Cover: *Euphorbia skottsbergii* var. *kalaeloana*.

90-806 O—82——2

Placing Animals and Plants on the List of Endangered and Threatened Species

The Endangered Species Act of 1973 is one of the most far-reaching wildlife conservation laws ever enacted by any nation. It is mainly carried out by the U.S. Fish and Wildlife Service, in conjunction with cooperating States and other Federal agencies. The Service shares responsibility for administering the 1973 Act with the National Marine Fisheries Service (for marine species), while the Animal and Plant Health Inspection Service enforces regulations governing the import and export of Endangered and Threatened plants.

Nearly 300 native American mammals, birds, reptiles, fishes, plants, and other life forms (as well as nearly 500 foreign species) have been placed on the U.S. List of Endangered and Threatened Wildlife and Plants and now receive protection under the Act. A species can be listed under one of two categories, Endangered or Threatened, depending upon its status and the degree of threat posed to it. An "Endangered" species is one that is in danger of extinction throughout all or a significant portion of its range. A "Threatened" species is one likely to become Endangered in the foreseeable future.

When a species is proposed for Endangered or Threatened status, areas essential to its survival or conservation are also proposed for protection as "Critical Habitat," when appropriate. In most cases, therefore, the listing process includes a Critical Habitat determination.

The listing process, which is explained in this publication, is a basic function of the Service's Endangered Species Program. Once this has been accomplished, other activities such as law enforcement, research, and land management, are undertaken to enhance the species' chances for recovery and survival. All those efforts contribute to the benefit of the species and assist the program in achieving its ultimate goal—to restore animals and plants to the point where they are no longer either Endangered or Threatened and can be removed from the list.

The Process for Listing with Critical Habitat

To list a species and to determine its Critical Habitat, the Fish and Wildlife Service follows a painstaking legal process known as a "rulemaking (or regulatory) procedure." This procedure is followed by Federal agencies to propose and later adopt regulations that have the effect of law and apply to all persons and agencies under the jurisdiction of the U.S. .

When biological evidence concerning a species' status is not conclusive enough to justify a listing proposal, the process may begin with publication of a "notice of review," soliciting more information on the species from any source. This (and all other notices throughout the rulemaking process) is published in the *Federal Register,* a daily Federal Government publication.

If and when information is sufficient to warrant listing consideration, the Fish and Wildlife Service (or, for marine species, the National Marine Fisheries Service) then publishes a "proposed rulemaking" in the *Federal Register,* proposing to list the animal or plant as Endangered or Threatened and, if appropriate, to designate Critical Habitat for the species. At this and every other stage of the listing process, all interested parties are encouraged to comment on the proposal (generally a 60-day period is provided), and to attend any public meetings or hearings held on the proposal.

The listing procedure involves the public, the scientific community, the States, other Federal agencies, and sometimes foreign governments. To make sure that all interested members of the public are aware of a proposal, the Service issues news releases and special mailings, and informs the scientific community and other Federal and State agencies of the notice. In addition, the Service publishes as a legal notice a summary of any Critical Habitat proposal in a newspaper serving the area.

If a proposed rulemaking includes Critical Habitat, the Service holds a public meeting on the proposal within the area in which a particular Critical Habitat is located in each State. A more formal public hearing may be held after the public meeting in each State in which the Critical Habitat is proposed. Any member of the public may request a hearing be held. Requests must be made in writing no later than 15 days after a scheduled public meeting. In certain cases, the Service may schedule a hearing on its own about 15 days after the public meeting.

Following the public comment period and public meetings on a proposal to list a species and its Critical Habitat, the information received during those times is analyzed. Based on the best available biological and economic data, a final rulemaking may then be published. The ruling generally becomes effective 30 days after publication in the *Federal Register.* After a species is listed, its status is reviewed at least every 5 years to insure that Federal protection is still warranted.

While the Service may initiate listing proposals, such actions also may start as petitions from individuals or organizations. Indeed, anyone may file such a petition—supported with adequate biological data—under the Endangered Species Act. See p. 7 for suggested data outline.

Criteria for Listing a Species

A species is added to the list when it is determined that its existence is threatened by one or more of the following factors:

- The present or threatened destruction, modification, or curtailment of the species' habitat or range.
- Overutilization for commercial, sporting, scientific, or educational purposes.
- Disease or predation.
- The absence of regulatory mechanisms adequate to prevent the decline of a species or degradation of its habitat.

- Other natural or manmade factors affecting the species' continued existence.

Criteria for Critical Habitat

Critical Habitat includes the areas of land, water, and air space required by an Endangered or Threatened species for its normal needs and survival. In determining the specific areas needed for each species, biologists consider the physical and biological features essential to its conservation.

Habitat characteristics which may require special management or protection are also considered. Usually, Critical Habitat includes only the habitat occupied by a species during some part of its life cycle, but sometimes areas outside of the species' current range are also included when they are considered essential to its conservation or survival.

The following physiological, behavioral, ecological and evolutionary requirements are considered:

- space for individual and population growth and for normal behavior,
- food, water, air, light, minerals, or other nutritional or physiological requirements;
- cover or shelter,
- sites for breeding, reproduction, rearing of offspring, germination, or seed dispersal; and, generally,
- habitats that are protected from disturbances or are representative of the historic geographical and ecological distributions of listed species.

After a particular area is identified as appropriate Critical Habitat for biological reasons, additional information on economic and other impacts associated with the designation is gathered. This information is requested from appropriate Federal agencies, States, and other knowledgeable entities.

With every listing proposal which includes a Critical Habitat designation, the Service prepares a draft impact analysis which considers the beneficial or detrimental economic and other impacts of the Critical Habitat designation. This document is available to the public at the time the proposed rule is published in the *Federal Register.*

Certain areas may be excluded from the Critical Habitat designation if the Secretary of the Interior or Commerce decides that the economic benefits of exclusion outweigh the benefits of conserving the areas. Such areas would not be excluded, however, if their exclusion would result in extinction of the species.

Critical Habitat designations affect only federally authorized activities and are made primarily to assist Federal agencies in locating endangered species and in fulfilling their responsibilities under the Act for conserving them. Private activities on non-Federal lands are not restricted by the Endangered Species Act unless direct harm to listed wildlife would result.

Although private or State lands may be designated as Critical Habitat, the designation does not make the area a "wilderness sanctuary" or close it to human activity. In cases when disclosing the exact location of a rare species could make it more vulnerable to collecting or disturbance, the Service may decide it would not be prudent to determine Critical Habitat for a particular species.

Suggested Criteria to Petition for Listing

Anyone may petition to have a species placed on the List of Endangered and Threatened Wildlife and Plants. The Act requires that substantial information to warrant review must be included with such a petition. Below is a suggested outline for submitting listing data.

I. General Information
    A. Present and past distribution
    B. Estimated numbers
    C. Ecological requirements; natural history; limiting factors

  - D. Habitat: physiographic, botanical, zoological; includes general considerations as well as specific associations
  - E. Systematic status—especially if there is some question regarding status or nomenclature
  - F. Significance or special considerations
  - G. Reproductive potential in captivity or by other manipulative methods

II. Reasons for Consideration
  - A. Range or habitat destruction or modification—past, present, or future
  - B. Overuse for commercial, sporting, scientific, or educational purposes
  - C. Depletion through disease, predation, or grazing
  - D. Inadequate laws or regulations
  - E. Other natural or manmade factors affecting existence

III. Additional Comments
  - A. Status recommended based upon prognosis for survival
  - B. Recommendations for actions (short-term and long-term) to enhance the survival possibilities of the species
  - C. Critical Habitat recommendation—both written and on topographical maps, if available
  - D. Any other pertinent remarks

Data for petitions should be sent to:

Office of Endangered Species
U.S. Fish and Wildlife Service
Department of the Interior
Washington, D.C. 20240

Senator CHAFEE. Is there some kind of a priority system regarding your listings, in other words, mammals first, or anything like that?

Mr. LAMBERTSON. Yes, there is, Mr. Chairman. At the present time and in the past we have had a priority system that looks at two primary features, first, the degree of threat to the species and, second, to give higher taxa, such as a class or full species, protection over population and subspecies. Those were the two primary criteria we looked at to determine the priority for listing. During this last year we estimated that we had approximately 50 species in the higher category, that is high degree of threat, full species. The question then became what priority do we use within that grouping to determine which goes on the list first, and the decision was made to go with the higher life form, then lower life form, within those categories.

Senator CHAFEE. In other words, a California condor is more important than a snail darter?

Mr. LAMBERTSON. I wouldn't say it is more important.

Senator CHAFEE. It would get higher priority?

Mr. LAMBERTSON. In that process it would, yes, sir.

Senator CHAFEE. Or the grizzly?

Mr. LAMBERTSON. Yes.

Senator CHAFEE. But don't we run into a problem? It seems to me biologists have said, the foundation of any ecosystem is what you might call the lower life forms, and if you don't have them at the bottom of the chain of life, where are you when you get further up the chain?

Mr. LAMBERTSON. Well, sir, there is no doubt that the lower life forms are a very important part of the ecosystem, and our priority system was not intended in any way to say they are not an important part of the ecosystem. However, when you have a limited resource, and in some groups, such as beetles, well over 1 million species, we have to make some choices as to which higher priority species should be listed. We have to have some system for determining which are more important.

Senator CHAFEE. I am not being critical. I think you have a tough job.

Senator Mitchell, do you have any questions?

Senator MITCHELL. Yes, I do. Thank you, Mr. Chairman.

Mr. Stevenson, in your statement you identified two issues, one which you titled section 7 regulations, and you described the problems that have arisen because there have been no final regulations implementing the amendments of 1978 and 1979. My question is, Why haven't there been final regulations?

Mr. STEVENSON. It has been my understanding there have been differences of opinion on the regulations drafted to implement the amendments to the act. Those regulations have been under discussion by all of the Federal agencies involved. We have been working very closely with the Fish and Wildlife Service on getting those particular set of regulations out. The delay has been due to the difference of opinion within the various agencies about specific details of in the proposed regulations to effect the amendments.

Senator MITCHELL. Is there any prospect that the regulations will be issued in the near future?

Mr. STEVENSON. We anticipate that they will be promulgated within the near future. I am not sure whether it will be before the act comes up for reconsideration by the Congress or not.

Senator MITCHELL. Did you want to address that, Mr. Jantzen?

Mr. JANTZEN. If I might, sir.

Senator MITCHELL. Yes, sir, go ahead.

Mr. JANTZEN. In February we sent a copy of the proposed draft regulations to all the Federal agencies for comments. We have incorporated their suggestions into a new draft. However, since Congress will be reviewing and possibly amending the act in conjunction with reauthorization, we have postponed further action on the regulations until the Congress has completed its review. Otherwise, if we proceeded ahead, we might find ourselves in a situation of spending considerable time and then having to go back and redo it again after Congress has come to whatever decision it is going to in the reauthorization process.

Senator MITCHELL. So, in effect, nothing final will happen in this area until Congress acts then?

Mr. JANTZEN. Yes, sir, we are trying to keep the cart behind the horse.

Senator MITCHELL. Mrs. Dinkins, you are appearing here today on behalf of the Department of Justice; is that correct?

Mrs. DINKINS. That is correct.

Senator MITCHELL. I was very interested in your statement on injunctive authority in which you urged the Department be given greater injunctive authority. You are aware that your boss, the Attorney General, about a month ago made a speech in which he was very critical of the Federal courts, a speech to which I took, and still take, strong exception. But one of the criticisms he made was that the Federal courts are excessively using and abusing their powers under injunctive authority, and that it is a goal of this administration, as he put it, to curb the Federal courts, which according to him are doing all kinds of awful things in our society. With that in mind, do you still recommend that the Government be given the right to seek injunctive relief, which would, of course, only lead to more injunctions in the Federal court?

Mrs. DINKINS. Senator Mitchell, I was present when Attorney General Smith delivered that speech, and I appreciate what you are saying. In this specific case, we believe that it would be better for endangered species if we had specific authorization to seek injunctions so that we could prevent harm, rather than simply prosecuting somebody who engaged in it.

Senator MITCHELL. And you are not worried about some Federal judge abusing this authority if you come in and seek an injunction?

Mrs. DINKINS. I believe we can craft our request for relief in such a way it will not be a problem.

Senator MITCHELL. I agree with you and not your boss.

Senator CHAFEE. Any criticism Attorney General Smith had of the bench were not retroactive to the extraordinary capability of district court judges of the past.

Senator MITCHELL. I thank you, Mr. Chairman.

Let me ask Mr. Jantzen just a couple of questions.

Mr. Jantzen, in your statement you said that, "Since 1978 we have listed a total of 148 species," and Mr. Lambertson discussed the priority system in response to Senator Chafee's question. Do you have a breakdown on how many of those were plants and animals?

Mr. **Lambertson**. We don't have that with us; we could provide it for the record.

Senator **Mitchell**. Could you do that?

Mr. **Jantzen**. Certainly.

[The information requested follows:]

Species Listed in Fiscal Years 1978-81

Fiscal year 1981—October 1980 through September 1981: Animals, 1; plants, 3.
Fiscal year 1980—October 1979 through September 1980: Animals, 23; plants, 33.
Fiscal year 1979—October 1978 through September 1979: Animals, 30; plants, 5.
Fiscal year 1978—October 1977 through September 1978: Animals, 23; plants, 18.
Totals for species: Animals, 77; plants, 59.

Senator **Mitchell**. You also indicated at a later point in your statement that since 1979 you have engaged in approximately 2,100 formal consultations and some informal, and of all these consultations jeopardy has only been found in 154. Does that mean that they all have been resolved or are there still some conflicts which remain unresolved and you have only completed a portion of the consultations?

Mr. **Jantzen**. Senator, I will let Mr. Lambertson answer that question. Before he does though, as I understand it, in those cases where jeopardy was found, in most instances there were reasonable and prudent alternatives which were available and which were implemented. So, even though there was a finding of jeopardy, it did not mean that the project was halted.

Senator **Mitchell**. I understand that.

Mr. **Jantzen**. There may have been some cases where alternatives weren't available and I will let Mr. Lambertson address those.

Senator **Mitchell**. I guess what I am saying, you described a total number of consultations and a small number in which jeopardy has been found. My question is, so I can understand fully the impact of that statement, Are all of the consultations resolved so that this is an accurate final figure with respect to the number in which jeopardy was found, or do there remain a portion of the total unresolved so that the number in jeopardy may, upon completion of the total number, increase somewhat? Do you follow the question?

Mr. **Lambertson**. It is a very difficult question to answer. First, we don't have a mechanism to go back and monitor the project; we are putting that in place. Also as the Director has indicated in almost all of the situations jeopardy opinions were given, there were reasonable and prudent alternatives available, and many times there were quite minor additional features or alterations to the project which avoided jeopardy. In addition to that, there are some projects that were not completed, and in those cases it is difficult to determine to what extent the Endangered Species Act was a factor in the noncompletion of that project. There are very few I am aware of in that category. It could be a combinatiuon of financial and other problems that precluded the projects from going to completion. It would be very difficult for us to tell whether or not the Endangered Species Act was the primary reason for it not being completed, but we are attempting to make that kind of determination right now.

Senator MITCHELL. Well, I appreciate that because that is very informative. I guess I didn't make my question clear. What your answer dealt with was the practical effect of jeopardy findings. What I am trying to get at is to determine whether or not this rate—you have 1.5 percent of the cases in which a consultation occurred, formal or informal, in which jeopardy was found. I guess I am trying to find out with respect to the 98.5 in which jeopardy was not found, has the consultation been completed so this is actually an accurate 1.5 percent in that total? Are there still a number unresolved so the rate of cases in which jeopardy might be found could be higher than 1.5 percent?

Mr. LAMBERTSON. No; the figure I gave you includes resolved cases.

Senator MITCHELL. Just one more question, and I will yield.

Senator GORTON. I have no questions.

Senator MITCHELL. Just one more for Mr. Jantzen. I understand, Mr. Jantzen, that the Service recently clarified the regulatory definition of the term "harm" under section 9; is that correct?

Mr. JANTZEN. Yes, sir.

Senator MITCHELL. Would you describe the change and also, more importantly, tell us what practical difference, if any, in administering the Act and enforcing the act this will make?

Mr. JANTZEN. Yes, sir. Mr. Chairman, if I could, I would like to have Mr. Lambertson address that because I was not on board at the time that happened. But, as I understand it now, the definition requires that there be a linkage between an action taken and harm to the species, whereas the previous definition did not necessarily provide for that linkage. Mr. Lambertson can go on from there.

Mr. LAMBERTSON. That is correct. Under the first definition, it could have been construed that environmental modification even though it did not have a nexus to the species, could have been grounds for criminal prosecution under section 9. The new definition requires some nexus between the actual modification of the habitat or environment and the impact on the species.

Senator MITCHELL. Are you able at this time to evaluate what effect this will have on enforcement? It seems clear that it will have a restricting effect. That is not necessarily bad. But are you able yet to evaluate that?

Mr. LAMBERTSON. No; we haven't. In the 8 years of the act, we are only aware of one situation where this definition came up in a confrontational sort of case. It is another one of those problems that is to a large extent, hypothetical; what if this kind of thing happened? But we can't tell yet how big an impact this is going to have on administering the program.

Senator MITCHELL. Could I ask, Mrs. Dinkins, if you are aware of this and if you are able to assess from the standpoint of the litigating arm what effect this will have on enforcement?

Mrs. DINKINS. I believe we would have taken that into consideration in terms of prosecuting anyone in any event. I think this simply helps clarify what we have in the way of a thought process.

Senator MITCHELL. In other words, in evaluating a case in which there was no nexus, you probably would not have prosecuted that case?

Mrs. DINKINS. I think that is correct.

Senator MITCHELL. You don't like to lose cases any more than anyone else.

Mrs. DINKINS. No; we prefer to bring cases we think are really meaningful.

Senator MITCHELL. Thank you, Mrs. Dinkins, Mr. Stevenson, Mr. Lambertson, and Mr. Jantzen.

I have no further questions, Mr. Chairman.

Senator CHAFEE. Thank you, Senator Mitchell.

Mr. Jantzen, I would like to refer you to page 6 of your testimony in which you say, and I find this very, very encouraging,

> Since 1979 we have engaged in approximately 2,100 formal consultations and 7,500 informal consultations. Of these 9,600 consultations, jeopardy has only been found in 154, or approximately 1.5 percent. Reasonable and prudent alternatives have been developed in the majority of these cases. There have been no applications for an exemption under section 7(h) from the act since the original Grey Rocks and Tellico exemptions.

We discussed that earlier. Now, I think that is an extraordinary achievement. I think that it is indicative of what we are trying to do under the act, and I commend you and those who have worked with you for resolving these matters and for not going through the exemption process, or resolving an issue so it didn't have to.

My question is this: Do you know of any instances where the proponent of a project received a jeopardy finding and could have gone to the exemption committee but chose to abandon the project instead of dealing with the act's requirements?

Mr. JANTZEN. Mr. Chairman, I am not aware of such a case but let me ask Mr. Lambertson to respond.

Mr. LAMBERTSON. No, Mr. Chairman, I am not aware of a specific project that was abandoned because the decision was made that the exemption process was too cumbersome.

Senator CHAFEE. I realize this is hard to quantify because there are a host of reasons people might abandon the project. But I expect some witnesses are going to tell us that there have been a host of situations where this cumbersome, difficult process has caused projects to be abandoned. To your knowledge, do you know of any such projects?

Mr. LAMBERTSON. I should point out a specific situation on the Upper Colorado River. We have been conducting a 3-year study, funded by a number of agencies, to gather the necessary information to determine what certain endangered fishes in that river system will need to protect their continued existence. We have just finished that study and are about to the bottom line where we think we can tell everyone what can and cannot be done on that river without jeopardizing the continued existence of those species. However, there are a number of projects that have been in the proposal stage—22 to be exact—for a number of years that may have been delayed to some extent because of a concern that they would receive a jeopardy opinion and might not be able to make it through the exemption process. So, there may be people who have not requested consultation, or if they have requested consultation have not moved forward because of their concerns with the exemption process.

Senator **Chafee**. My next question, Mr. Jantzen, is the $28 million we have authorized in 1981. I guess that was an appropriation. That gets kind of mixed in in your whole series of accounts. It must be very hard for you to say these x dollars go for endangered species.

Mr. **Jantzen**. Mr. Chairman, I look to Mr. Lambertson again because he manages that program.

Mr. **Lambertson**. Mr. Chairman, those funds are carefully segregated into the endangered species program, and the endangered species program accounts for the expenditure of all those funds through the fish and wildlife refuge system, through the research division, through law enforcement, because we can track all those dollars down to specific activity.

Senator **Chafee**. Well, I am not questioning your bookkeeping in any way. I am just saying it must be extremely difficult to allocate how much time has been spent in somebody working in a wildlife refuge, how much is for endangered species and how much for normal duties.

What are the figures that are being currently discussed? What is the 1982 figure?

Mr. **Lambertson**. Well, as you know, Mr. Chairman, we don't have a budget yet. We are still operating on a continuing resolution. I would have to say that the ball is in Congress court. The figure that came out of the conference committee is approximately $20 million.

Senator **Chafee**. And are there figures being discussed for 1983?

Mr. **Lambertson**. Fiscal year 1983 would be approximately the same depending on which proposed cuts may go through. As you know, the budget situation right now is very uncertain, and we have to identify which budget we are talking about at which given time.

Senator **Chafee**. And whose figures are we using?

Mr. **Lambertson**. At the present time, the most reliable figures for 1982 are the conference committee figures.

Senator **Chafee**. Mr. Stevenson has made an important point on page 2 of his testimony. "Effective implementation of the act must continue if we are to preserve the world's genetic heritage for future generations." But effective implementation can be undermined by inadequate budgetary support or, indeed, administrative delays. A whole series of things can undermine what could well be a fine, excellent act. Isn't that true, Mr. Stevenson?

Mr. **Stevenson**. Yes, I agree, Mr. Chairman.

Senator **Chafee**. All right, thank you very much.

Senator **Mitchell**. Mr. Chairman, could I follow up on that?

Senator **Chafee**. Yes.

Senator **Mitchell**. I didn't quite get the figures. You use the figure $20 million.

Mr. **Lambertson**. Yes, for the Fish and Wildlife Service. I am not talking for the National Marine Fisheries Service.

Senator **Mitchell**. As opposed to what figure in the previous year?

Mr. Lambertson. Approximately the same. However, you have to understand the figure that is coming out of the conference committee does not have the $4 million State grant program in it. That is the major difference between the 1981 and 1982 figures. Congress did not restore $4 million for State grants and, accordingly, that program is probably dead as far as a grant program. Otherwise the Federal portion is approximately the same as for last fiscal year.

Senator Chafee. What do you think that will do to the program in the absence of State grants?

Mr. Lambertson. I am very concerned about disruption to the overall program that will occur as a result of not having the State grant program. We have 38 States with cooperative agreements. Most of those States have very high quality programs, and do in essence what we would be doing, probably for less expense and effort.

Senator Chafee. What kind of money are you talking about in a State? I suppose in California it might be rather significant than Vermont. Do you have any idea what the figures might be in a large State and small State?

Mr. Lambertson. A large State could run up to $1 million, a small State down to $20,000 or $30,000.

Senator Chafee. What did the administration request for 1982, do you know?

Mr. Lambertson. In the grant program?

Senator Chafee. In total. Well, let's take the nongrant.

Mr. Lambertson. Nongrant, total program is approximately $14 million, as I remember, $13.8 million.

Senator Chafee. So you got $20 million.

Mr. Lambertson. The conference committee has designated approximately $20 million.

Senator Chafee. I had in my mind the figure of $28 million.

Mr. Lambertson. That is the authorized amount. We are authorized to receive up to $28 million.

Senator Chafee. In 1981?

Mr. Lambertson. In 1982, I believe. It is graduated over each year, and the authorization has always been far ahead of the appropriation—not far ahead, but somewhat ahead.

Senator Chafee. How much does National Marine Fisheries have? Do you have a specific amount appropriated to you?

Mr. Stevenson. Yes, sir. I would like to ask Mr. Roe if he would answer that particular question.

Senator Chafee. Richard Roe. It seems to me I knew him in law school.

Mr. Roe. There really is a Richard Roe, known not only through law school but also the lawsuit, Richard Roe against Somebody. My lawyers were delighted I finally legitimized the law books.

Mr. Chairman, our expenditures for the act in 1981 were about $2.6 million. In 1982, I have the same problem Mr. Lambertson has given the state of the 1982 budget, but we had, if I recall correctly, asked for $2.3 million. I am not certain yet, and I don't think anyone in the Federal Government is, what actually we are going to get.

Senator Chafee. Do you track those dollars down through a host of accounts and specific allocations here and there?

Mr. Roe. Oh, yes; and those funds, as far as I can recall, are used totally in the endangered species program. We do not have grants to the States, the cooperative agreements, as Fish and Wildlife does. So, our moneys are spent almost totally on research programs and management functions, under which we lump section 7 activities.

Mr. Stevenson. Mr. Chairman, if I may comment on that, and I think the same may be true for Fish and Wildlife Service. The way we are structured to assure that various specifically targeted programs are effectively administered for the results of those programs, we set up program directors, like Mr. Roe who identifies where that money goes into the functional activities of the agency as the money is being administered. So he is responsible for tracking it down through the entire system and making sure the functional activities of the agency are responsible to the Endangered Species Act for which the moneys are appropriated.

Senator Chafee. I don't doubt that. I was thinking in the case of Mr. Jantzen's organization, where you say you have 7,500 informal conferences, inevitably those must be with your regular Fish and Wildlife people in Florida or Wyoming or wherever it is. Does he then say, "I spent half a day on endangered species," does he keep a log?

Mr. Lambertson. We track it two ways. We have a specific log for all our section 7 consultation people to keep track of their consultations, both formal and informal. Every month that is reported to the Washington office. In addition to that, FWS employees track the amount of time and money they spend under portions of the program. So if a person worked on section 7, that person would log one informal consultation and send it to us, and also log the hours of effort and expenditure for that activity.

Senator Mitchell. Could I follow up with Mr. Jantzen and Mr. Lambertson, because I understand the figures here, including the State grant program, level of funding in the previous fiscal year was $24 million, the administration recommended $14 million, and the conference committee has recommended $20 million.

Senator Chafee. So far.

Senator Mitchell. That is where we stand now. I have two questions. Do you believe that this act could be effectively enforced at the level of funding sought by the administration, that is $14 million, or a 40-percent reduction over the previous year funding?

Mr. Jantzen. Mr. Chairman, Senator Mitchell, it could be effectively enforced, but you are talking about degree of enforcement, basically, and there would be a lesser degree of enforcement.

Senator Mitchell. It still could be effectively enforced?

Mr. Jantzen. I believe it could be.

Senator Mitchell. What level below which could you drop?

Mr. Jantzen. I can't give you the answer to that question.

Senator Chafee. I suppose you get into the definition of "effectively."

Mr. Jantzen. Yes, sir, you do.

Senator Mitchell. So I assume your answer is the same to the $20 million level; it is still effective, a little more effective than $14 million but not as effective as $24 million.

Mr. Jantzen. It is better.

Senator MITCHELL. What do you think, Mr. Lambertson?

Mr. LAMBERTSON. I have to agree with that.

Senator CHAFEE. You certainly do have to.

Senator MITCHELL. I don't think I will get any more out of you guys.

Mr. JANTZEN. I hope not.

Senator CHAFEE. Well, gentlemen and Mrs. Dinkins, let me say this, as you deal with the Vice President's group and as you come back to us, I think I can say that this subcommittee, and indeed this full committee, is supportive of this act. If you want to see it changed, the burden of proof is on you folks to come forward and show us why. We don't feel any great urgency to change this act nor to accept regulatory—these days everything is called reform—regulatory alterations. We look forward to what you have to submit to us, but remember that this is an act that has been on the books since 1973. It deals with an area that the members of this committee are deeply concerned about. It is a very modest program. Looking at it from any measure, and particularly in view of a $700 billion budget, the amounts being expended on the Endangered Species Act are very modest. We have set up the appeal process, the exemption committee. We went through the entire act 2 years ago when we got into the Tellico Dam thing. So we have recently been through this. We are supportive of it. And even in a situation like Tellico where there was all kinds of support for the project, you remember the resistance changes in the act encountered here and in the full Senate. An exemption from the act for Tellico was defeated in the Senate and the only way it ever got through is by a House amendment to an appropriations bill. It came over and then when it got to the Senate it got through. But that situation was a fait accompli. The thing was 95 percent built. But I think the actions of this committee, and the Senate as a whole, clearly showed how we stood. I hope you bear those thoughts in mind as you come forward. Indeed, I do urge you and admonish to the extent I can that you meet the January 20 deadline.

Senator MITCHELL. I would like to commend you, Mr. Chairman, on your leadership in this area and to say, to repeat really, that this is an important act that serves a valuable national purpose, small perhaps in the overall scheme of a large, diverse and technological society, but all the more important for those very reasons, and we regard it as such. I share Senator Chafee's views, and I know other members of the committee do. So I urge upon you careful consideration as you contemplate what changes, if any, you feel should be made.

Senator CHAFEE. I also would like to say that the concern of this committee, as evidenced in the Tellico situation, goes beyond the spectacular mammals and the very visible, well-known species, the grizzly bear or the alligator or the California condor, and so forth. I think it is right down through the whole chain of life, as was mentioned here, the concern for the ecosystem.

So, thank you very much, gentlemen, Mrs. Dinkins, for coming here.

[Mr. Jantzen supplied the following information:]

ADDRESS ONLY THE DIRECTOR
FISH AND WILDLIFE SERVICE

United States Department of the Interior

FISH AND WILDLIFE SERVICE
WASHINGTON, D.C. 20240

In Reply Refer To:
FWS/OES 920.2C
FWS 3188

FEB 18 1982

Honorable John H. Chaffee
United States Senate
Washington, D.C. 20510

Dear Senator Chafee:

Thank you for your December 21 letter regarding several issues raised at the December 8 and 10, 1981, hearings on reauthorization of the Endangered Species Act. We regret the delay in our response.

With regard to the proposed listing of the Illinois mud turtle, the sequence of events was as follows: As early as 1971, concern about the continued survival of the turtle was voiced to the then Bureau of Sport Fisheries and Wildlife. A number of other scientists subsequently reached similar conclusions. At the suggestion of Dr. Lauren Brown, Associate Professor of Biological Sciences at Illinois State University, the Illinois mud turtle was placed on a Notice of Review of various turtles, which was published in the June 6, 1977, Federal Register. At the same time, Dr. Brown was asked to prepare a status report on the species.

On July 6, 1978, a proposed rule to list the turtle as Endangered was published in the Federal Register, and a reproposal of Critical Habitat followed on December 7, 1979. Through these publications, and at both public meetings on the proposal, all interested parties were encouraged to provide information which might contribute to the formulation of a final rule. All public comments received between July 6 - October 5, 1978; December 7, 1979 - February 5, 1980; and February 6 - March 22, 1980, were considered. In addition to 5 supportive statements by State officials, 131 written comments were received; 100 supported the proposals, 3 opposed them, and 28 only commented on some aspect of the biology of the turtle, such as its taxonomic status, distribution, or ecology, without taking a position on its listing.

During the review process, the Monsanto Chemical Corporation challenged the biological data in the proposal based on a study which they had conducted. The public hearings mentioned above were held, one in Springfield, Illinois, and one in Muscatine, Iowa. The disagreement among the scientific community, however, was not resolved. Consequently, U.S. Representative John Breaux and former Director of the Fish and Wildlife Service Lynn Greenwalt agreed to approach the National Academy of Science (NAS) to ask its advice in resolving the contradictory positions assumed by the two factions of the scientific community. Since there were only 2 months remaining before the species either had to be listed or withdrawn under the 2-year limitation imposed by the 1978 Amendments to the Endangered Species Act, the NAS did not have enough time to establish the special review panel and oversee the process. NAS did, however, furnish the Service with the names of the individuals it would have selected, and the Service's Division of Research convened the panel and carried out the review. Based on that review, the Division of Research recommended to the Director that the species not be listed. Director Greenwalt concurred in that recommendation, and the species was withdrawn from its proposed status.

Concerning listing data, it was not our intent to mislead the subcommittee with regard to the number of species listed by this administration. The testimony stated that since 1978, the Service had listed 148 species under the Act. This information was provided merely to bring the members up-to-date concerning our accomplishments under the Act since the subcommittee's last oversight hearing. With regard to your question about the number of species listed by this administration that had not been proposed by the previous administration, there have been none thus far, due to reviews implementing Executive Order 12291 and the Regulatory Flexibility Act. The Hay's Spring amphipod, a small aquatic crustacean, was listed as Endangered on February 5, 1982. (The classification was originally proposed on January 12, 1977, later withdrawn, and reproposed on July 25, 1980.) One species of plant, Carter's panicgrass (Panicum carteri), was proposed as Endangered on January 30, 1981.

Finally, in regard to the suggestions for a consolidated list of protected species, we are not only in complete agreement with the suggestion, but such a list already exists. Several years ago, the Federal Wildlife Permit Office (FWPO) contracted with the Association of Systematics Collections to produce the Directory of Federally Controlled Species. This directory lists all species protected by the Fish and Wildlife Service, as well as several other agencies, such as the Department of Agriculture. The directory is updated every 3 months. Although the directory was produced under contract for use of the FWPO, it is available by subscription from the Association. In addition, the FWPO has just completed a series of four public workshops in Washington, D.C.; Los Angeles, California; Miami, Florida; and New York, New York. One of the primary purposes of these workshops was to assess interest in and develop ideas for an expanded version of this consolidated list. The FWPO is now entering initial discussions with the Association to explore the feasibility of such an expansion of the consolidated list, along with a monthly updating service. We hope to have such a publication available for the public within the next 3-4 months, either through the Association or some other suitable contractor.

We have enclosed a leaflet explaining how the listing process normally works, and we hope it is helpful. If we can be of any further assistance, please call on us again.

Sincerely yours,

Robert A. Jantzen
Director

Enclosure

Senator **Chafee**. The next panel will be Marshall Meyers and Stephen Boynton.

STATEMENTS OF MARSHALL MEYERS, COUNSEL, PET INDUSTRY JOINT ADVISORY COUNCIL AND STEPHEN BOYNTON, COUNSEL, AMERICAN FUR RESOURCES INSTITUTE

Senator **Chafee**. We will proceed with Mr. Meyers, whom we have seen here before. I guess we saw you when you were up here for the Lacey Act.

Mr. **Meyers**. That is correct, Senator.

Senator **Chafee**. And then Mr. Boynton. Please keep your statements reasonably brief. I notice both of you have statements for the record. We will, of course, put those in the record.

Why don't you go ahead.

Mr. **Meyers**. Thank you, Senator.

I want to thank the committee for extending an invitation to us to testify today.

Senator **Chafee**. And I want to thank you, Mr. Meyers, for your work with us on the Lacey Act. I know we consulted with you, and I don't know how you feel about the final product, but your views were considered. You can say a good word for it now.

Mr. **Meyers**. I would digress from my Endangered Species Act comments and say I believe many of the safeguards we sought have been included in the Lacey Act amendments, we feel they will be effective, and hopefully we will not have to go through the amendment ordeal for a number of years.

Senator **Chafee**. Your voice was heard.

Mr. **Meyers**. Thank you, sir.

The endangered species program is fraught with complex, emotional, and environmental issues which require the balancing of interests. Some consider us a lower life form because we happen to deal in wildlife. But we need both the act and CITES because they are both essential to insuring the protection of endangered and threatened wildlife. We also view wildlife as a renewable resource. On balance, it is our position that the act appears to be effective even though there are a few problems we encounter.

As a preliminary comment, I want to make it very clear that we endorse reauthorization for a 2- or 3-year period. It gives the Congress a unique opportunity to have periodic reviews and to make sure the act is working.

Most of our concerns have been and can be resolved through administrative action; they do not require substantial amendments at this time. The captive breeding regulations and the requisite permit procedures, for example, have been streamlined and are working. We have to complement Interior's Wildlife Permit Office continuing experimentation with innovative procedures to make the program more efficient and effective.

There is a serious problem I want to address, and this is an administrative problem. It involves myriad wildlife lists one must go to to find out whether or not they are in compliance. Instead of having a consolidated list, one may have to turn to three or four different lists. Inadvertent errors are made, even errors by Interior's staff. An Interior agent advised an importer all he needed was a CITES permit, when in fact an Endangered Species Act permit was needed also. We believe the lists can be consolidated and resolve a lot of confusion for those of us dealing in wildlife.

The dual listings under CITES and the act also cause confusion, especially as to nonnative species. CITES is an international trade convention to protect those members of the animal kingdom proven to be endangered or threatened. A mechanism permitting trade in appendix II, or threatened, species has been incorporated. It makes little sense, therefore, to list CITES appendix II nonnative species under the act when the CITES parties, often countries of origin, have affirmatively determined that trade is permissible. We believe the Department should explore other methods for handling nonnative species listed under appendix II before turning to corrective legislation as a way of curing that.

An area we feel requires review and probably statutory amendment involves the listing/delisting process. We are opposed to some of the letterwriting contests, ex parte communications, political pressures, and reliance upon data not subjected to the burden of proof and cross-examination of a formal hearing. We feel an Administrative Procedures Act section 554 procedure would be more appropriate to develop the best scientific and commercial data available. This is a formal hearing process that would develop an evidentiary record based on cross-examination and the findings of an administrative law judge.

Providing for formal hearings would result in more realistic decisionmaking. It would alleviate the concerns of States, foreign countries and other interested persons with respect to improper listings or delistings. The hearings would not be mandatory for all listings/delistings, but could be invoked when there is a substantial controversy or by the Department's own initiative. To avoid lengthy delays in listing species, a listing could be made pending the outcome of the hearing. Those provisos should provide ample safeguards to those who want to challenge a listing.

As to CITES implementation, we cannot fault Interior's processing of appendix II permits. The Department has made strides in making the process more efficient. The CITES listing/delisting procedures, however, are a different story. As under the act, a number of species have been listed which are clearly neither endangered nor threatened.

The only practical recourse available to the United States to protest an unwarranted listing is entering a reservation pursuant to article XXIII of CITES. We recognize the inherent difficulties and foreign policy issues related to invoking this form of opposition. In certain circumstances a reservation is appropriate.

I have summarized the issue of the parrot listing at the recent CITES meeting only to provide a real, not hypothetical, example of an unwarranted listing.

But, Senator, we recognize that entering a reservation is not an easy solution to this problem. Entering a reservation alone does not resolve the problem. And I am not prepared today to support a statutory amendment which automatically triggers a reservation. I think more research is required because of the obvious constitutional issues and other foreign policy concerns.

The final area of concern involves the International Convention Advisory Commission. In our opinion, ICAC is a beautiful example of an organization which exhibited a tremendous ability to generate paper, publish inaccurate data, and consistently recommend cumbersome recordkeeping requirements, survey forms, and other documents to justify and perpetuate its existence.

Senator **Chafee**. Mr. Meyers, isn't your first point and this point really the same? It seems to me you object to the CITES listings and felt they were subjected to political pressure, and so forth; doesn't that result because of the International Convention Advisory Commission, which is the scientific advisory body to CITES? In other words, don't the actions of this Commission cause the problems that you are concerned about in your first point?

Mr. **Meyers**. I am not sure I clearly understand your question.

Senator **Chafee**. Well, as I understood your first point, you consider the listings, and particularly the CITES listings, to be arbitrary; scientific data was virtually nonexistent, it was politically influenced, a host of reasons lead you to believe that the CITES lists were not based on scientific evidence. That is your first point.

Mr. **Meyers**. Right.

Senator **Chafee**. Now you say your final area of concern involves the International Convention Advisory Commission. Is that the group that advises CITES as to what should be on the list?

Mr. **Meyers**. No, sir, that Commission advises the Secretary of Interior as to better methods of implementation; they also make recommendations as to whether certain species should be listed. They are, however, an advisory body only to the Secretary of the Interior, not CITES.

Senator **Chafee**. I see. Is this International Advisory Commission an American group?

Mr. **Meyers**. This is an interagency group created under the Endangered Species Act in 1979; it is purely interagency. I don't know all of the members, but they come from Agriculture, Commerce, Interior, Smithsonian, etc. We feel it has been duplicative of what has been done in Interior and should be legislatively abolished; we don't feel it has been effective.

In closing, I want to emphasize our position that, on balance, the act and its implementation is effective. We look forward to working with the committee and participating in future hearings and will submit our comments as to the reservation issue before the January 8 date.

Thank you, sir.

Senator **Chafee**. All right, fine, thank you, Mr. Meyers.

Mr. Boynton?

STATEMENT OF STEPHEN S. BOYNTON

Mr. **Boynton**. For the record, my name is Stephen S. Boynton, Washington counsel for the American Fur Resources Institute. We appreciate the opportunity to make a statement before you concerning proposed amendments to the Endangered Species Act. The American Fur Resources Institute is composed of trappers and fur dealers throughout the United States who have more than a nodding acquaintance with this act, the regulations thereunder, and judicial interpretation of its implementation.

The American Fur Resources Institute strongly supports the concepts embodied in the Endangered Species Act. The major concern, however, is the manner that this act is implemented administratively and interpreted judicially. This concern, we believe, is basically the issue before Congress. In short, it is not the intent that Congress has evidenced but the implementation of that intent.

I was very interested in the comment from you, Mr. Chairman, and Senator Mitchell about the approach this committee would take to the act. We certainly believe the act is one that is needed.

We feel the implementation of this act should be based upon sound principles of wildlife management and not be dependent upon the specious arguments of protectionism, emotionalism, and hollow rhetoric.

Further, we believe that this act should not be influenced or administered in one fashion under one administration and in another manner in a different administration, particularly when the two extremes are sound wildlife management and protectionism. Rather, the implementation should always be couched in terms of scientific wildlife administration—regardless. We believe it is the duty of Congress to insure that such administration will be consistent and we would trust the committee approaches any changes in the act with this thought.

One of the primary issues that has concerned the wildlife community, which was mentioned by Mr. Jantzen, is the bobcat issue. I would like to amplify some of the issues he raised.

As pointed out, at the first meeting of the parties of CITES, the bobcat, river otter, and lynx were listed on appendix II. Basically, appendix II is those species thought to be threatened with extinction and require monitoring. Through the provisions of CITES, bobcat pelt exports could not take place unless the Scientific and Management Authority determined that export would not be detrimental to the survival of the species. As Mr. Jantzen pointed out, commencing in 1979, this issue has been in litigation. At the present stage, the court has yet to rule whether or not there can be an export of the bobcat pelt from the 1981–82 season.

However, we feel that the implications of this decision go far beyond the bobcat situation. First of all, the court held there could not be an annual harvest of bobcat pelts unless there were "reliable population estimates" and a determination on the number of pelts taken. The species involved, the bobcat, is difficult to even have a population estimate at all. However, there is no wildlife professional manager that concurs that that standard of reliable population estimates is necessary; it is just one of the indicia that should be used.

Taken to its logical conclusion, the more numerous the species, the less likelihood that reliable population estimates can be obtained. Two examples come to mind. First, in most States there is a rabbit reason. To establish a reliable population estimate as to the number of rabbits would be virtually impossible. Another example would be the mourning dove where population estimates would be mere guesstimates. However, both of these species are under management programs of the State which embodies sound principles of wildlife administration. It is not an idle belief that various antihunting and antitrapping groups will attempt to utilize this decision to further attempt to block annual harvests of various species. This is not an unfounded fear. For example, this past year there was a trapper education bill in the State of Oregon which the trappers supported. The Defenders of Wildlife, Inc., through their lobbyists, were able to have an amendment added to that, that no trapping could take place of any species in that State unless reliable population surveys were undertaken. Fortunately, the bill was defeated but this event certainly bodes ill of what attempts will be made to use the precedent of this court action.

Clearly, there is a distinct possibility of a challenge to no-detriment findings for river otter and lynx. Courts may be requested to apply the requirement that wildlife management decisions under the Endangered Species Act include the decisions to add a species to the threatened or endangered species list under section 4 and the requirement that all Federal agencies "insure that their action will not likely jeopardize the continued existence of any" species. We urge that Congress consider legislation to remedy this position.

I might say parenthetically, the Migratory Bird Treaty Act would also have to be changed to conform to this change.

As far as the bobcat is concerned, we are informed that the United States will attempt to seek a delisting under CITES based upon the fact that the populations are not threatened. Further, it is our understanding that Canada is seeking to delist the lynx and will so make a formal request at the fourth meeting of the parties of CITES in 1983. It has been further suggested that the river otter is in no way threatened but that it remains on appendix II for look-alike purposes, to which we have no objection.

However, given these efforts on behalf of bobcat, river otter, and lynx, we hasten to point out that even if such delisting takes place the far-reaching negative aspects of this case must be removed to permit the scientific principles of wildlife management to properly function.

Senator CHAFEE. What does "look alike" mean?

Mr. BOYNTON. Those are species that are similar in appearance. The river otter, for example, is not an endangered species, but the sea otter is, and after it is harvested and you have the two pelts there must be a control to the river otter to be sure there won't be more taking of sea otter and the pelts mixed together. This is true in many other species, similar to the example of the river otter and the endangered species of the sea otter on the west coast.

Senator CHAFEE. Thank you.

Mr. BOYNTON. We believe that the bobcat, river otter, and lynx saga illustrates a situation that can only be corrected by Congress. Although the United States is obligated by international agreement under CITES to have a scientific and management authority to determine the status of domestic species, the State governments are, in fact, the entities which have the information, scientific data, and administration of resident wildlife and fish. Consequently, we believe if it is determined that a particular species is not threatened or endangered that information must be accepted by the Federal Government. Barring any abuse of discretion or arbitrary and capricious decisions, the Federal Government should be mandated to accept that position. Further, if a resolution is made at a CITES meeting to list such a domestic species differently than the States have determined its status, the Federal Government should be bound to take a reservation.

Having attended two of the three meetings of the parties of CITES, I believe CITES is maturing by treating the convention as an international trade convention rather than an endangered species convention. However, the United States should not be put in the position of having its quality of wildlife administration dictated to by others outside the United States. As already mentioned, the quality of our wildlife management efforts in the United States should not be dependent upon a particular administration. We believe it is the duty of Congress to insure that the administration of fish and wildlife in this country will always be based upon the principle of sound wildlife management rather than emotion and rhetoric.

Mr. Chairman, in our formal testimony we submit several specific suggestions. However, at this point I will terminate my remarks this morning. I look forward to working with the staff on the bill that will be introduced this coming month and testifying further on those specifics.

Thank you, Mr. Chairman.

Senator CHAFEE. Thank you, Mr. Boynton.

I guess nobody will ever argue with the statement you have on page 8 where you say, "to insure that the administration of fish and wildlife in this country will always be based upon sound principles of wildlife management rather than emotion and rhetoric." It is through the eye of the beholder what is sound and what is emotion and rhetoric.

Mr. BOYNTON. That is why, Mr. Chairman, I used the example of listing the bobcat. At the first meeting of the parties, the United Kingdom made a resolution that all cats, with the exception of domestic cats, be listed on appendix II because they are involved in trade. Now that is clearly emotion and rhetoric. There is no scientific basis for that. Mr. Meyers mentioned the CITES meeting in New Delhi where they listed some 300 birds on appendix II based on no scientific evidence. So, this isn't just rhetoric, it is intellectual dishonesty and will destroy the act if it continues.

Senator CHAFEE. Let me question you. On page 2 of your testimony, you state that "the implementation of the act should always be couched in terms of scientific wildlife management—regardless." That is toward the bottom of the page.

Mr. BOYNTON. Yes, sir.

Senator CHAFEE. "The implementation should always be couched in terms of scientific wildlife management—regardless." Then on page 12 you talk about the economic impacts that should definitely be a criteria in the decision to list a species as endangered or threatened. Could you explain what appears to me to be a contradiction?

Mr. BOYNTON. I also point out on page 12, Mr. Chairman, it should be a factor that should be considered but should not be controlling. There are many species that are listed on the endangered species list of CITES and of our listing in the United States that are not managed, and therefore there is a subjective judgment as to whether or not the value of that particular species should in fact—and you have the Grey Rocks and Tellico Dam situations—hold up whatever benefit that must be to the environment or man. And I hasten to add man is part of that ecosystem.

Senator CHAFEE. But we have a review process in the exemption committee. Are you suggesting changes in that exemption committee?

Mr. BOYNTON. I would suggest some changes in that but only as to timing. But, to answer your specific question, the act speaks of the best scientific and commercial data available. I am suggesting that that commercial data ought to embody the economic impact that that exemption process or that decision by Fish and Wildlife would have upon, not only the environment, but man particularly. There are areas not only in fur trade, but in agriculture. Let's take an exemption process of a locust plague. The corn and grain would be gone by the time the exemption process took place, and that is an economic factor. I am just suggesting that that ought to be one of the laundry lists of indicia of criteria that the Secretary uses when he makes his listing decision. I don't believe that it is now, and I cite in testimony the example of the Illinois mud turtle. I don't believe that was considered at all.

One of the problems, and you pointed that out, Mr. Chairman, is through the eye of the beholder. I think wildlife management is wildlife management. However, some of these decisions on listing as far as threatened or endangered species a lot of times it is a close call. But I think it has been, in the recent past at least, say since this act has been passed, the suggestion is you will err on the side of the species, forgetting what implication that might have. I don't think that is proper, and I don't think that is proper wildlife management considerations, nor do I believe that is the intent of Congress.

Senator CHAFEE. Wait a minute. We are dealing with the Endangered Species Act. Yes; I think we should err on the side of the species.

Mr. BOYNTON. Without information?

Senator CHAFEE. Well, we have procedures to appeal and we have consultation procedures. We have an exemption committee to go to. What are you suggesting?

Mr. BOYNTON. I am suggesting that the burden is upon the Department of Commerce and the Office of Endangered Species that when they take a position it ought to be based on some scientific evidence in that position. And I cite in my testimony the example of the Illinois mud turtle. That had gone all the way to the National Academy of Sciences because Fish and Wildlife insisted that was an endangered species. The Monsanto Chemical Co. spent $500,000 to prove that the Fish and Wildlife Service was wrong. I don't think that is where the burden should be. I think the burden is on the Department of Interior to say if that listing takes place they have evidence that supports that listing. That is a classic example of, in my judgment, saying, "Well, we don't have enough data; let's list it." If they had done their job, they would have had enough data.

Senator CHAFEE. I can't disagree with you that there has to be a scientific base. Are you suggesting there is no scientific basis in the listings that have taken place to date by Fish and Wildlife and National Marine Fisheries?

Mr. BOYNTON. Not at all. I am suggesting in many cases, and that is a demonstrable one, there is not scientific evidence to make that decision. I think the Fish and Wildlife Service has done a creditable job with limited personnel and funds. But that it turned out to be, since we don't have enough personnel or funds, we are going to list it. The same with CITES and the listing of all of the cat family. I don't think that is intellectually honest.

Senator CHAFEE. Now you are talking about the CITES process.

Mr. BOYNTON. It is the same approach. The United States supported that position in 1977 and voted for the resolution. We spent 3 years in litigation before asking Congress for an amendment to change it.

Senator CHAFEE. Well, the CITES record we have to look into because I suppose the problem is with the United States setting an example by taking reservations to CITES. I suppose the danger is if every nation can then proceed to take a reservation to CITES, then the economic pressures in a host of the other nations would undermine the whole point of CITES.

Mr. BOYNTON. If that were taking place. And I suggest any reservations being taken should be based on some sound basis for that decision. There is clearly no question that the United States should have taken a reservation to the listing of bobcats. I think the plaintiffs in the case that have caused the concern would not make a statement that the bobcat is a threatened species. It clearly is not, nor the river otter, nor the lynx. Then we have the absolutely dangerous precedent in the court decision which would change the annual harvest of species in the United States. The listing was a disaster, and it was not based upon any scientific evidence, just as all cats. We do know some cats are endangered. In fact, the U.S. Fish and Wildlife Service has just proposed an item to allow importation of leopards from Kenya for noncommercial purposes, and I am sure that comes as a shock to many people, but it is not an endangered species in that particular geographical area.

Senator CHAFEE. Senator Gorton.

Senator GORTON. No questions.

Senator CHAFEE. Senator Mitchell.

Senator MITCHELL. I would like to ask Mr. Meyers, on page 4 of your statement, you discussed what you called a serious problem, the myriad wildlife lists one is compelled to review. At the bottom of the page you suggest "Interior should consolidate the wildlife lists and code them to indicate the applicable laws and regulations." If you know, Mr. Meyers, why has this not happened?

Mr. MEYERS. We have tried for 3 years to get the Department to do it; we are hoping some influence by this committee could get the job accomplished. I honestly think that part of the problem has been a funding problem. It is a big job to try to take the Migratory Bird Act, Endangered Species Act, CITES listings, and the other wildlife lists and consolidate them into a single list; it will take a fair amount of work. The list would have to be published in the Federal Register since one is held criminally liable, both under the Lacey Act and Endangered Species Act for violations. I don't think the Department will, until they can be assured they have a complete list, publish a list that is going to lead to more inadvertent errors. It is something, however, we believe can be done and should be done.

Senator MITCHELL. Because of the sequence of witnesses we can't ask Mr. Jantzen that. But, Mr. Chairman, I would like to have the staff prepare a letter to go to the Department of the Interior enclosing a copy of this portion of Mr. Meyers' statement and his recommendation and asking whether or not Interior agrees this consolidation should occur, and if it does why has it not occurred, and can we expect it will occur.

Senator CHAFEE. All right, fine. We will have other opportunities once we get into the hearings.

Senator MITCHELL. You [illegible] forewarn them that is a good idea. I would like to ask Mr. Boynton, you have kindly, in response to the chairman's request, omitted portions of your written statement. But I found that the paragraph which begins at the bottom two lines of page 12 and continues on to page 13 contains what appears to be a rather significant recommendation as to a specific amendment, and I wonder, even though we are concerned about the interests of time and having everybody testify, whether you would read that paragraph. It begins "We are also troubled," and it goes to the first nine lines on the next page, and then expand on it a little bit, because I want to ask some of the other people who are going to follow you what they think of that. In fairness, I think you ought to have a chance to explain this specific recommendation and why you think we ought to adopt the course you recommend.

Mr. BOYNTON. Thank you, Senator.

> We are also troubled by the "jeopardy" standard contained in section 7 of the act. Although the amendments in 1979 changed the language from "do not jeopardize the continued existence . . . of endangered and threatened species or result in the destruction or modification of habitat of such species . . ." to "not likely to jeopardize . . . ," there is some major question that any real change has been made in practical administration. We believe that a modification would be in order to state that consultation by Federal agencies shall ensure "insofar as practical" that any action is not likely to jeopardize.

The point there, Senator, is that the 1979 amendment changing the language from "do not jeopardize" to "not likely to jeopardize," and as I recall in the committee discussions and the debate, was that the "not jeopardize" was too much of a formal position that may be difficult or unable to say that it won't jeopardize because anything has an impact on the environment, a footprint, a stone thrown, whatever. So, "not likely to jeopardize" which supposedly made it less restrictive, I understand in the discussions with the Department of Interior, and I was interested in Mr. Jantzen's testimony on this point that they plan to expand on it, even "not likely to jeopardize" is causing several of the agencies problems that eliminates their primary mission and subjects any of their action—and this may be the intent of Congress, I am not suggesting it shouldn't be—any of their actions subservient to the Endangered Species Act. The suggestion "insofar as practical" with their primary mission it is not likely to jeopardize, expands it even more. Now, if the position is made by the Office of Endangered Species by the Department of the Interior, they still have veto, but the agency that is seeking that consultation as far as our primary mission is concerned, as far as our actions, we don't believe insofar as practical it is likely to jeopardize the species or habitat. It just opens it a little further. This is particularly true, and I have some experience with this, with EPA. They have great difficulty saying that nothing, is not likely to jeopardize.

Senator MITCHELL. I wanted to understand because you spent a considerable time discussing the problems that arise when decisions are made without a sufficient data base, and that is not the concern here, I gather, from your answer here. I didn't know whether "insofar as practical" meant that where you didn't have sufficient information you wouldn't take that kind of action.

Mr. BOYNTON. No.

Senator MITCHELL. This is an entirely different problem as far as you are concerned?

Mr. BOYNTON. Yes.

Senator MITCHELL. And I gather what you are saying, it involves the primary mission of other Federal agencies.

Mr. BOYNTON. There are about 124, I believe, that are required under their programs to consult with the Office of Endangered Species to see that their proposed activity will not likely jeopardize the species or habitat. I understand there is some difficulty in interpreting that agency's mission.

Senator MITCHELL. As I understand your comments, essentially what you are saying, and if I am misunderstanding this please tell me, the way the law was originally written and as amended gives undue dominance to the interests of the endangered species over the primary mission of other agencies, and this is an effort to restore some balance, as you would see it, by reducing the dominance of the Endangered Species Act and providing a less restrictive definition here to permit the primary mission of other agencies to give greater weight in this whole equation. Is that a fair statement?

Mr. BOYNTON. Yes, with just one amendent in that many of the agencies are fearful of violating that language because they don't know the answer. That is why the initial standard was changed to "not likely to" from "will not."

Senator MITCHELL. I am not sure adding the words "insofar as practical" makes it clearer or adds another ambiguity.

Mr. BOYNTON. Well, again, I was pleased to hear Mr. Jantzen say they plan to address this in specifics, and I don't know exactly what that language may be. But I fear it is causing some problems now and extreme delays in a lot of areas.

Senator MITCHELL. Thank you.

Senator CHAFEE. Thank you very much, gentlemen, for your testimony.

The next panel is Mr. Huey, Mr. Glass, and Mr. Williamson.

We will be concluding this hearing in 1 hour, at 12:25. So, we have five witnesses, and that means that the witnesses will have to restrict themselves to 5 minutes. That will leave us an opportunity to question you. We have your statements, gentlemen. We will put them in the record.

We have a short statement from Mr. Wes Hayden, legislative counsel for the International Association of Fish and Wildlife Agencies which we will make part of the record at this point.

[The statement referred to follows:]

STATEMENT FOR SENATE SUBCOMMITTEE ON ENVIRONMENTAL POLLUTION HEARING ON ENDANGERED SPECIES, December 8, 1981

Mr. Chairman, I am Wes Hayden, Legislative Counsel for the International Association of Fish and Wildlife Agencies.

We are, as you know, a voluntary organization with member agencies in each of the 50 states as well as in a number of Federal and Provincial departments in this country, Canada and Mexico.

So structured, we have an obvious and substantial interest in the future of the Endangered Species Act and in the hearing your subcommittee has undertaken on the subject.

And we believe that interest can be most effectively conveyed by the witness who will present the organization's testimony today.

He is uniquely qualified by knowledge, training and in-depth experience to speak on this important subject. He will address it from the perspective of a state game official long involved in endangered species program activities and in efforts to establish a viable basis for establishment of experimental wildlife populations. He also brings to this hearing the insight gained from official participation as a U.S. delegate in CITES meetings in Berne, Costa Rica and most recently in New Delhi.

I am pleased to introduce with those comments William S. Huey, Secretary of the New Mexico Natural Resources Department and Chairman of the IAFWA Legislative Committee.

I would also want the record to show that the National Association of Conservation Districts has asked to be associated with the statement he is presenting.

Senator **Chafee**. Why don't you go ahead in the order you were called, Mr. Huey first.

STATEMENTS OF WILLIAM S. HUEY, CHAIRMAN, LEGISLATIVE COMMITTEE, INTERNATIONAL ASSOCIATION OF FISH AND WILDLIFE AGENCIES; JAMES GLASS, PRESIDENT, WILDLIFE LEGISLATIVE FUND OF AMERICA; AND LONNIE WILLIAMSON, SECRETARY, WILDLIFE MANAGEMENT INSTITUTE

Mr. **Huey**. Mr. Chairman, I am Bill Huey. I am secretary of the natural resources department for the State of New Mexico. I am chairman of the legislative committee of the International Association of Fish and Wildlife Agencies.

I appreciate the opportunity to address the committee and to express some of our concerns and interests regarding the Endangered Species Act.

Senator **Chafee**. We appreciate your being here.

Mr. **Huey**. Mr. Chairman, one of the things that used to really bore me 20 or 25 years ago was some guy standing up and saying he had been involved in wildlife management for 25 years and knew all the answers. I started working in the protection of wildlife in 1948; I have been involved in it ever since that time. I have been chairman of the endangered species committee of the International Association as well as of the legislative committee. I have participated in first reviews of the endangered species list. I have been a member of the U.S. delegations to CITES at Geneva, at San Jose, Costa Rica, and in New Delhi. I really feel that the States have a critical position in the implementation, enforcement, and practice of the endangered species program. As I say, I have been involved in it personally.

Senator **Chafee**. Do you know all the answers?

Mr. **Huey**. I don't know the answers, Mr. Chairman. I know a lot of questions.

Senator **Chafee**. Well, you go right ahead. I am sure you can be of help to us.

Mr. **Huey**. We share the concerns previously expressed regarding the question that has arisen over the bobcat case. It is unfortunate that questions of that kind have to cloud what otherwise is a very valuable instrument, the Convention on Trade in Endangered Species. But since it has developed, we would like for the Congress to amend the act in such a way that States that exercise management authority over species listed in appendix II qualify for export if they have taken action which permits the taking of species listed.

I am not sure of the specific language needed for an amendment of that kind. We have developed some language. I am not sure that we have universal agreement among all persons concerned, but it can be accomplished, I am sure.

We also feel that the International Convention Advisory Commission has simply added a layer that could be removed, that the Endangered Species Scientific Authority required by the treaty could be accomplished in an executive manner by the Interior Secretary or by the Director of the U.S. Fish and Wildlife Service.

Senator **Chafee**. You have some consolation. I understand there is no funding for ICAC in the 1982 budget.

Mr. HUEY. I understand that.

Senator CHAFEE. You applaud that?

Mr. HUEY. I feel it would be a better approach to take legislative action to make this correction rather than a somewhat punitive action in taking the money away from them.

We feel an annual review of this "no detriment" finding is not biologically practical or necessary.

I see the sands of time are flowing there. I am halfway through my cards. I will speed up a little bit.

Another problem that has developed for us in the states with regard to enforcement of the Endangered Species Act is one having to do with experimental population, where we take action to try to restore a population. We release a group of these endangered species, and then we find ourselves snowed under by all sorts of threats of court action or the enforcement of jeopardy in other elements.

Senator CHAFEE. By whom? Who gets after you with court action?

Mr. HUEY. Well, we are threatened with court actions by various groups.

Senator CHAFEE. Well, would they be environmental groups? Farmers?

Mr. HUEY. Environmental groups I don't like to categorize. I consider myself to be an environmentalist, and have been since before it got to be popular. The specific case I am addressing in this context, however, is one having to do with whooping cranes in New Mexico, where we were denied the opportunity to participate in banding activities on other water fowl because it might jeopardize the population of whooping cranes which were the results of reintroduction. Incidentally, we have supported that action. I am president of the Whooping Crane Conservation Association. There is no conflict of interest in this. And I feel that this is not atypical. There are other situations that develop where it is considerably more difficult. The primary objective of the endangered species list should be to have all the species removed from the list. They should become so abundant it wouldn't be necessary for them to be listed. Use of artificially propagated individuals is a way to do that.

We have a number of fish species in New Mexico which we could restore; they are threatened or endangered. We are not going to permit those species to be released into our streams if they are going to have an adverse effect on sport fishing. I am sure this could be expanded to other endangered species, where the primary source of recovery opportunity is either the release of artificially propagated individuals or trapping and transplanting. This is one of the tools that is available to us, where the scarcity of that species is the result of some activity that hasn't completely destroyed the habitat, and we would like to see something done on that.

We feel that if the Congress does amend the act a complete review should be conducted by the Department of Interior and the Fish and Wildlife Service, and any regulations that are holdovers that haven't been reviewed or replaced by 1984 should be abolished, or they should expire at that time.

We also would like to see some specific language in the act which would give the states a percentage of any amount of funds appropriated for endangered species. We have been in kind of an orphan child position with funding on this. The passage of the act created a significant responsibility for the States. It increased our costs of operation. It gave us a lot of things we had to do. There was an amount authorized but not appropriated.

Senator MITCHELL. What is going to happen if there is $20 million available for the Department but nothing for the States? What is going to happen to the State program?

Mr. HUEY. The programs that we have been funding with those funds we received under section 6 will have to be eliminated unless——

Senator MITCHELL. Are they significant programs?

Mr. HUEY. I sincerely hope so. I would hope we wouldn't involve ourselves in them if they aren't significant. Quite obviously, we will look at them on a priority basis and perhaps spend all State money to fund those projects.

Senator MITCHELL. What percentage of your total budget comes from section 6 of the act?

Mr. HUEY. Very, very minor.

Senator MITCHELL. So, you would continue in operation no matter what?

Mr. HUEY. We are not going to discontinue our efforts on behalf of endangered species because we were involved in endangered species activities and the protection of endangered species in New Mexico before the act passed. We had State laws that made those provisions, and we are going to continue to implement them.

Senator CHAFEE. That is probably the theory of the administration: that you will continue, and this is one small way that the Federal Government can save money.

Do you know how much came to New Mexico under the act?

Mr. HUEY. We were receiving about $35,000 or $40,000. It is not a lot of money.

Senator MITCHELL. But you want that back.

Mr. HUEY. I would like to have it back.

Senator MITCHELL. Because you recommended you get a specific portion of whatever the Federal appropriation is.

Mr. HUEY. I would like to see the States get a set percentage of whatever is appropriated for endangered species, and I would also like to see the maximum ratio changed from 50/50 to 75/25. It puts endangered species in a more competitive position if we have a better matching formula that is more generous toward the endangered species.

Senator MITCHELL. It will help you get the New Mexico Legislature to appropriate more if you can tell them for every dollar they put up they will get three Federal dollars.

Mr. HUEY. It is much easier.

Senator CHAFEE. I admire your courage and optimism in coming here and suggesting they not only restore but increase the Federal contribution.

Mr. HUEY. Mr. Chairman, when we are talking about what one administration does, I have seen a lot of administrations come and go, and things change from one to the other. And I hope that the changes we are suggesting in this act will not be related to administrations but will be related instead to the resource and the public's interest and the constituency concerned.

Senator **Mitchell**. But the problem with that is, that is really a statement that is divorced from reality. Here you have an administration which has as a major objective reducing Federal spending and reducing the Federal role in all areas of our society. So you can't just come in here and say, well, you hope it doesn't happen. Here is the administration that wants to cut this Interior budget from $24 to $14 million.

Mr. **Huey**. Quite obviously the funding for in any program is affected by the position adopted by the administration in power, but in the end the Congress has something to say on that subject, too, and we see a lot of cases already where the amounts that are currently being considered by the Congress are higher than those recommended by the administration.

Senator **Mitchell**. And this is one such area?

Mr. **Huey**. Yes, sir.

Senator **Mitchell**. The administration recommended $14 million and we provided $20 million. All I am saying to you is I think it is an unrealistic notion to believe, and I am not suggesting you do believe it, it doesn't make any difference what the administration is. It is the commitment of the administration as set forth in actual dollars that is important. And it is one thing for someone to come up and say, look, I really believe in protecting endangered species but we can't afford it so we won't support it. That is a commitment in words as opposed to deeds. I think those of us who are concerned, as you obviously are, are more concerned with deeds rather than words. I don't think it is enough to say, well, it ought to be the same under all administrations. It isn't the same.

Mr. **Huey**. I know it is not the same under all administrations. That is what I meant when I said I have seen administrations come and go and have seen the attitudes change. We are still here and operating. We are talking to the administration, the international association and I as an individual in my State. We get along fine with the administration. They don't do everything we would like, but they talk to us at least. Hopefully conversations will continue and we will be able to get some response. There is always another year. We are waiting for next year.

Senator **Chafee**. Wait till next year. Gentlemen, we really have to proceed. Time is running by on us. We will have an opportunity for questions.

Mr. Glass, please proceed.

STATEMENT OF JAMES H. GLASS

Mr. **Glass**. Mr. Chairman, I am Jim Glass, president of the Wildlife Legislative Fund of America.

Senator **Chafee**. Your statement will be entered into the record so you can summarize if you wish.

Mr. **Glass**. Yes, sir. I believe, Mr. Chairman, there have been a great many items that I am going to testify about that we have listed in our testimony that have already been covered, so I will be very brief in comments on some of them.

I would like to say, however, that the Wildlife Legislative Fund strongly supports legal protection of endangered species.

Senator CHAFEE. Just in passing, your statement lists the organizations you represent and which contribute to the Wildlife Legislative Fund. What is Mzuri Safari and Shikar Safari Club International, just out of curiosity?

Mr. GLASS. Those are groups made up of big-game hunters, Africa and India. One of them is African and one of them is Indian type of hunting.

Senator CHAFEE. I see. Thank you.

Mr. GLASS. There are a great many continuing and growing number of organizations that are genuinely interested and involved in environmental and conservation issues, and these organizations speak from a wide spectrum of viewpoints. Because of the number, it is sometimes easy to lose sight of the role sportsmen play in conservation. It was interesting to listen to the discussions from members of the committee and the administration, and Mr. Huey a moment ago, about the money situation, where it comes from. All these groups that are involved and you will be hearing from, lobby the Congress and get involved in education of the public and some even get involved in court suits. In most cases, however, the efforts stop there. This is particularly true of those who are most vociferous and anti-hunting and ready to condemn all hunters. I would like to bring your attention to the fact that the sportsmen's contribution doesn't stop there. A recent study we conducted in 1979 shows that well over three-fourths of all moneys that go to manage the wildlife resources by our State fish and game departments comes from and is paid totally by sportsmen through the license fees, through the moneys derived from the Pittman-Robinson Act for firearms and hunting equipment and Dingell-Johnson on fishing tackle. When we are talking about the dollars, we are talking about the people who are responsible for voluntarily giving up and contributing a minimum of 75 percent of the money that goes to fund the State wildlife agencies.

In addition to that, these same sportsmen's organizations spend considerable amounts of dollars through their own projects. As an example, Ducks Unlimited plans to spend $1 million per week, or a quarter of a billion dollars, through 1986 on habitat protection in Canada, Mexico, and the United States. Not one penny of taxpayers' dollars goes into these programs.

So I think it is important when we talk about cutting the Federal budget at the same time you have many sportsmen in the States who are urging their State legislative bodies to increase the fees they pay for hunting, fishing, and trapping licenses to insure the wildlife of this country is properly managed, and to also ensure those species which are threatened or endangered receive their proper attention.

Senator CHAFEE. Mr. Glass, I want to commend you for what you have raised here. I think it is important. I don't think any of us realized Ducks Unlimited is going to be spending $1 million a week through 1986 on habitat protection in Canada, Mexico, and the United States. The points you raised are excellent. I believe some of the greatest supporters of the whole so-called environmental movement are, and indeed should be, the wildlife hunters. If there is no wildlife, they certainly can't hunt.

Mr. GLASS. That is correct, sir.

Senator CHAFEE. And what you folks have done regarding protection of the habitat, we commend that. The Pittman-Robertson funds, as you point out, have come from sportsmen. As have the Dingell-Johnson funds. So there is no question these organizations you represent are crucial—I don't know the others, but I know Ducks Unlimited. I am not familiar with what Shikar Safari Club does, but if you represent them they must be good.

Mr. GLASS. They put up several million dollars a year for wildlife management.

Senator CHAFEE. Let's go to the discussion you have of changes in the act.

Mr. GLASS. There are some differences from the earlier testimony. We are proposing if a State with jurisdiction over wildlife species objects to the listing as an endangered species, that the Department of the Interior would be required to hold a formal hearing on that matter. Now, we are only speaking of a case in which a State objects, not a hearing for every species being listed which would have to go through the formal administrative procedures hearing and cross-examination, and so forth. We are only speaking of those in which a State would specifically object to a specific species. And the same thing holds with a foreign species being considered for listing, if that foreign country or foreign government did object, the Department of the Interior would conduct hearings.

In respect to CITES, we propose in a case in which a domestic species is listed by the convention and that species is not on the endangered species list, that our country would be required to take a reservation.

We also urge the Congress to overturn the U.S. Court of Appeals decision, as others have urged, in the bobcat suit.

And one thing, and maybe, Mr. Chairman, it might be PR from your perspective, but I can assure you it is one item from a sportsman's standpoint that makes them more concerned and does not give the Endangered Species Act the movement and credibility——

Senator CHAFEE. The bobcat controversy?

Mr. GLASS. No, sir; the language in the act which lists sport hunting—this is on page 5, the next to last paragraph—which lists sport hunting as a cause of endangerment of species. We feel very strongly, sir, that language should be deleted, because it is just simply not true. There are no wildlife professionals on the State or Federal level that say that sport hunting is a cause of endangerment of species of wildlife.

So, we think the amendments we have proposed, while they are not major amendments to the act, will serve the purpose of strengthening the act and to also make the act more credible to a great many people who are concerned and who have misconceptions about the act itself.

Thank you, Mr. Chairman.

Senator CHAFEE. Suppose we made that "illegal sport hunting is a cause of endangerment?"

Mr. **Glass**. Well, once again, you are saying that sportsmen perform illegal acts. I don't agree with that. There are many people who hunt who violate the law and should be prosecuted, but I do not believe we should put the word "sport hunting" in there.

Senator **Chafee**. How about "illegal hunting?"

Mr. **Glass**. I would like to just encourage that we not use the word hunting in there, because the definition of "illegal" and "legal" and what you perceive as hunting and some people perceive of it, but there is no reason to think that hunting is a cause. The biggest cause is loss of habitat, and most of our species which have been threatened have been threatened by loss of habitat and not the consumptive use of the species.

Senator **Chafee**. Well, we haven't got time to debate that here. Thank you, Mr. Glass.

Mr. Williamson?

STATEMENT OF LONNIE L. WILLIAMSON

Mr. **Williamson**. Thank you, Mr. Chairman. I am Lonnie Williamson, secretary of the Wildlife Management Institute which is headquartered here in Washington, D.C.

I will make five quick points that have been covered to some extent by other witnesses. One is that we believe that one of the more controversial aspects of the current Federal program is critical habitat designations. We do not view it as controversial. We look at it as necessary. We think such designation undoubtedly restricts the type of activity that can be accommodated within specified boundaries. But, by the same token, protecting and improving habitat is the most basic and important management action required to perpetuate and restore endangered species populations. Without the protection, other efforts are futile.

We realize that some critical habitat designations may cause problems sometime in the future, if carried to an extreme under the current act. It is quite possible that numerous listings could get out of hand. If this were to be the case, a line will have to be drawn somewhere. And, as you know, that line is going to be difficult to draw.

With regard to the International Convention Advisory Commission, we suggest that the Commission could be abolished without detriment to endangered species management. It has served no useful purpose, in our view, and its demise would permit authorized funds to be invested in more important endangered species activities. We believe the Secretary has at his disposal ample expertise to serve as the scientific authority and as adviser. Additional expertise is available in the National Marine Fisheries Service.

Senator **Chafee**. Who is on the side of the International Convention Advisory Commission? Nobody has a good word to say for them. Anyway, their demise has apparently occurred.

Mr. **Williamson**. Good.

Senator **Chafee**. Well, that is the final epitaph.

Mr. **Williamson**. With regard to the bobcat decision, we think that the implication of this decision is much more important than as pertains to the bobcat per se. There is apprehension that the court decision may be interpreted to require similar wasteful expenditure of scarce funds to compile other unnecessary estimates of various other wildlife populations before they may be taken for any purpose. The status of bobcats and most other wildlife are monitored by the use of population trend data and habitat analysis rather than by actual counts which are extremely difficult and expensive, and in many instances impossible to obtain. Relative numbers are much easier to obtain and completely adequate to use when setting seasons and bag limits for taking most wildlife. This obviously is the case since many depleted populations have been restored during this century using that method. We believe, therefore, that the act should be amended to eliminate the negative impact of the court decision on sound wildlife management programs.

With regard to experimental populations, we agree with the international association's position as stated by Mr. Huey. Designations such as critical habitat can prevent management for other species, including the prohibition of taking nonendangered animals. As he stated, the States are reluctant to introduce experimental populations under these circumstances, and restoration of endangered species is hindered, which it should not be. We recommend that the act be amended to permit experimental populations to be established without the normal restrictions associated with critical habitat or similar designations.

In listings, the institute believes that the Endangered Species Act should be amended to make the national effort to manage endangered species a more cooperative Federal-State venture. The success of the endangered species program hinges largely on cooperation of State and Federal wildlife agencies. We believe, therefore, that there should be agreement as soon as possible among U.S. Fish and Wildlife Service and involved State wildlife agencies before any resident species is listed under the act as endangered. The act should be amended to require such joint agreement. We also believe that the United States should be mandated to take a reservation on species listed under CITES but not listed under the Endangered Species Act. This would return control of the U.S. endangered species program to the hands of U.S. agencies, both Federal and State, with appropriate professional staffs rather than leave it in the emotion-ridden arena of multinational fiat. This would end the present situation that finds wildlife management programs in this country penalized because of the failure of other nations to get their own programs into gear.

Thank you very much.

Senator CHAFEE. Thank you very much, Mr. Williamson. I think that is a good summary of a whole series of points that have been made here. Your testimony will be helpful.

As you mentioned, you dealt with the problem that Mr. Huey raised regarding reintroduction or the introduction of endangered species, and I think that is a very valid point. As I understood your point, Mr. Huey, you are currently discouraged from introducing the endangered species because of the limitations that are put on the existing nonendangered species that you have.

Mr. HUEY. That is correct, Mr. Chairman.

Senator CHAFEE. The point you made makes sense; sometimes in attempting to foster protection of the species we indeed discourage it.

That is all fine testimony.

Mr. HUEY. Mr. Chairman, may I make one more statement very quickly? I would like to speak on behalf of section 7. I don't think that the act should be weakened by any significant amendment of section 7. I also feel that the continued inclusion of invertebrates and plants in the endangered species contributes to the entire ecosystem approach you brought up earlier. In New Mexico we nominated the iscora isopod, which most people won't know, but it is a prehistoric bug. We have addressed ourselves completely to endangered species in New Mexico, and we hope the act continues to do the same.

Senator CHAFEE. Let me ask you a question in conclusion here. Perhaps Senator Mitchell has some questions.

Senator MITCHELL. Mr. Chairman, when you say "in conclusion," that means the end.

Senator CHAFEE. Well, in conclusion of my questions. This is rather a general question. Overall, do you think the act has worked well?

Mr. HUEY. I definitely think the act is worthwhile. When you discuss an act of this kind, you don't discuss all the good things about it, you discuss those things you want changed, and quite obviously you are talking about the bad things. There are problems with the act, but it is a good act; it has its place.

Senator CHAFEE. From your experience, have you seen development or activities that industry has wished to undertake that have failed to proceed because of the act and the refusal of the participants to go before the exemption committee?

Mr. HUEY. I don't know about that. I have seen a significant effort on the part of developers and persons who are interested in doing things to avoid confrontation, to do their homework, to identify where these confrontations exist and to try to alter their plans before it is even necessary to come to this point.

Senator CHAFEE. To the consultation or exemption process?

Mr. HUEY. Right.

Senator CHAFEE. What do you say to that, Mr. Williamson?

Mr. WILLIAMSON. I think, Mr. Chairman, in regard to your first question, the act has worked tremendously well, considering the very complicated language, the involved definitions and specific requirements imposed on the U.S. Fish and Wildlife Service. I think they have done a very good job, and I think it has worked. I am not aware of any great problem caused by the act. I hear a lot of suppositions of problems, but I am really not aware of many real problems. I think possibly one thing that caused the act problems several years ago was the Tellico Dam situation. I think the act was misused in highlighting this little snail darter as the thing that was holding up completing the dam. That dam should not have been built for other reasons, not because of the fish.

Senator CHAFEE. I hope I am not quoting Senator Baker out of context, but I heard Senator Baker say publicly in Providence, R.I., that if he started from ground zero, starting all over again, his approach would have been different. The problem was the thing was 95 percent built before the snail darter showed up.

Mr. **Williamson**. I believe we were the only conservation group that supported Senator Baker's position. And we did so because we did not think the Endangered Species Act and the endangered species program should be detracted from by being highlighted in such a negative manner.

Senator **Chafee**. Mr. Glass, what do you think of the act overall?

Mr. **Glass**. I think the act is necessary and thank goodness we have had it all these years. We support it and it is extremely important. Man has changed the environment in which he lives and he has changed the environment in which animals live, and if he doesn't actively participate in helping manage those species, whether they be abundant, threatened, or endangered, there isn't going to be any more. Thank goodness we have had the Endangered Species Act. We strongly support the efforts of your committee in these oversight hearings in taking a look at the act not in terms of gutting it or totally abolishing it, but from the standpoint that it has worked, and looking at which areas in the act might be improved so it will work better.

Senator **Chafee**. Well, thank you very much.

Senator Mitchell?

Senator **Mitchell**. No questions.

Senator **Chafee**. Thank you very much, gentlemen, we appreciate your coming.

The final panel is Mr. Patrick Parenteau and Mrs. Christine Stevens.

STATEMENTS OF PATRICK PARENTEAU, VICE PRESIDENT FOR RESOURCE CONSERVATION, NATIONAL WILDLIFE FEDERATION; AND CHRISTINE STEVENS, SECRETARY, SOCIETY FOR ANIMAL PROTECTION LEGISLATION

Senator **Chafee**. We welcome you both here. Mr. Parenteau, why don't you proceed. You have a rather large and very thorough statement which deals with the Endangered Species Act. Just skimming it, this appears to be the definitive work on the subject.

Mr. **Parenteau**. Thank you. I have an excellent staff that is responsible for that.

Senator **Chafee**. We will put that in the record, this looks very fine. But it will be necessary for you to summarize. Why don't you go ahead.

Mr. **Parenteau**. Thank you, Mr. Chairman. It is a pleasure to be here with you. My name is Patrick Parenteau. I am vice president for resource conservation with the National Wildlife Federation.

Since this is an oversight hearing, Mr. Chairman, we are going to concentrate our testimony on the act as it is being administered presently, what is working, and what is not working. As the reauthorization process continues, we hope to continue to be involved, and when it gets down to details and specifics of solutions, if those appear to be necessary, we would, of course, appreciate the opportunity to participate in any drafting of legislation, and so on.

But today I am going to stick with some general observations of how the act is working and how it is not. I would like to preface that with one comment, and that is that the support among the public at large for endangered species conservation and a strong Federal program remains very, very strong. All the polls we have consulted continue to indicate overwhelming support for conservation of endangered species. And when we polled our own members, representing mainstream conservation thinking in America, the support is clearly there.

Let me start with the positive aspects. The act has worked. Earlier this morning the Chair asked a question of the Fish and Wildlife Service regarding what types of species are being listed presently. I am happy to report we have done an analysis of all the species that have been listed, and by far the majority are in the category of birds and mammals. So, some of the comments about protecting lower life forms, even though we feel that is a critical element of the act, perhaps are not based on solid evidence.

Senator **Chafee**. Well, the committee feels it is a critical element, too. We agree. You heard Senator Mitchell's comments earlier.

Go ahead.

Mr. **Parenteau**. Thank you.

Clearly, over the years that the Endangered Species Act has been on the books, a number of species—whooping cranes, peregrine falcons, American alligator, the gray wolf, I could go on—all those species are in a much better condition today as a result of the Federal program and the assistance to the States under the cooperative agreement program.

In addition to that, we are seeing some modest gains in the area of habitat acquisition and protection of some critical areas. Most recently, the Federal Government was responsible for assisting in the acquisition of some land on Cape May Point, N.J., which is critical for endangered raptors.

The second positive aspect that I would like to touch briefly on is the large number of State cooperative agreements and State programs that have been entered into. Thirty-nine States are now participants with the Federal Government in cooperative programs, and 49 cooperative agreements have been signed to date.

The third item I would like to touch on is the cornerstone of the act, and that is section 7. If efficiency be the measure of success of section 7, then it is an outstanding success indeed, because in the 600 biological opinions that we have examined, one-by-one, over the last 2 years, we have found no delay whatsoever. In fact, the average time for completion of consultation is 78 days, as opposed to the statutorily required 90-day consultation period. There have been some brief extensions in some cases, but those have been agreed to by the action agency and wildlife agency. So we find absolutely no evidence of delay in consultation.

The second thing is we find no evidence that section 7 has stopped projects. Indeed, not a single project has ever been permanently stopped as a result of the Endangered Species Act. That is the point of the whole process. What it does is identify alternatives which allow the species to remain while allowing the project to go forward. In 154 opinions reaching jeopardy conclusions there were modifications and adjustments made in either the structure or operations of the project, but they were allowed to go forward. That is a remarkable credit to the consultation process and the Congress vision in putting that kind of process into the law.

Senator **Chafee**. Mr. Parenteau, I am sure your statements are going to be disputed when we have the industry representatives next Thursday. You don't happen to know what page that statement is on? I would just like to know. The industry representatives are obviously in the room. I will be asking them to comment on your testimony. You are sure you are right?

Mr. **Parenteau**. I am sure I am right. No project has been permanently halted. Things have been deferred while alternatives were explored and modifications made, but not a single project has been terminated permanently. There are two pending lawsuits, the *Riverside Irrigation* case and the *Pittston Oil Refinery* case, which Senator Mitchell is familiar with, in the State of Maine, and NWF is a party in both. Those two cases involve negative biological opinions, and the question whether the project is going forward is still in doubt. The point is no project has been halted. Even Tellico Dam and Grayrocks, of course, proceeded.

Let me turn to the problems of the act because even though there are many more positive aspects of the act, I think the committee certainly wants to hear some of the areas we think improvement is needed.

There are essentially four points that I would like to make in the area of needed improvement. Let me preface that by saying the act has been tinkered with to the point it is no surprise that a number of unwanted byproducts and implications that weren't adequately foreseen when adjustments were made have arisen.

The first area I would like to talk about is the listing process under section 4. Essentially what we have is a stalemate. Not a single new species has been proposed for listing since the current administration took office. They did complete a few listings that were started in the prior administration, but not a single new listing has been proposed in the Federal Register. The reason for that is fourfold. No. 1, there is a clear policy to prioritize the listing process, as might be expected, at the higher end of the taxa.

Senator **Chafee**. What is taxa?

Mr. **Parenteau**. The higher life forms, the more visible species.

Senator **Chafee**. They wish to put the more visible species, mammals, birds at the higher end, that is their top priority?

Mr. **Parenteau**. Those would be their top priority. That isn't exclusively the case.

Senator **Chafee**. But even so they have not listed any?

Mr. **Parenteau**. They have not proposed any listing as yet. They claim to be in the process of proposing them, but nothing has come forth in a year.

The second major cause of the stoppage of listing is, of course, the budget crunch, and that has been gone into. But obviously without money and staff you cannot complete the listing process and do an adequate job. The comment has been made that there is a lack of scientific evidence to support proposed listings. We don't necessarily agree with that allegation, but lack of funds does make it difficult to adequately staff the program and conduct necessary studies.

The third area is the burdensome economic analysis required by the 1978 amendments to section 4, which come into play in conjunction with the designation of critical habitat. That has proven to be an inordinately burdensome process and deserves to be looked at.

Yet another economic analysis is required by the President's Executive order on regulatory reform which is being applied to each listing. This process also causes significant delays in listing species.

Senator CHAFEE. You have 1 minute left.

Mr. PARENTEAU. Then I will go directly to a discussion of section 7.

The current administration is cutting back on the protections of section 7. The Department of Interior has issued two Solicitor's opinions, which I urge this committee to review carefully. One reviews an earlier Solicitor's opinion on consideration of cumulative impacts in the consultation process. The second is the application of section 7 on extra-national actions of the Federal Government.

Senator MITCHELL. Are those in your statement?

Mr. PARENTEAU. I am not sure we attached copies. We certainly could provide them. (See pp. 235 and 242.)

The second thing is, of course, we have no section 7 regulations to implement the legislative changes made in 1978 and 1979. They are still stalled.

Senator CHAFEE. In all fairness, you can't blame that on the present administration. You can blame them for one-third of the delay.

Mr. PARENTEAU. I agree. This is a nonpartisan issue. Both parties can share equal blame. But the fact is we don't have any regulations.

Let me conclude by talking about what I think is one of the most serious problems and questions that needs to be addressed, and that is the question of what do you do when you don't know. In other words what happens when there is inadequate information to complete the consultation process in the prescribed 90-day period of time? You have three options: Go ahead with everything; don't worry about it. If you do not have enough information say, "I don't know, go ahead." Second, stop everything and wait until you get the information. Mark time until the studies are done and the information is gathered. Third, and this is what we prefer, use section 7(d) the way it was intended to be used. That means prohibit those actions which constitute an irreversible commitment to a proposed course of action which would turn a proposal into a fait accompli before the consultation process is finished, but allow reversible commitments to be made, that is, commitments that could be channeled into some alternatives should the ultimate consultation prove jeopardy. That is the solution we think needs to be applied. It has not been applied, and is not being applied.

With that, I think I will stop and say that we feel very strongly about this program. We have a significant campaign underway in 1982 to celebrate the eagle bicentennial, to honor the eagle as the symbol of all endangered species in this country. We would look with great disfavor on tampering with the essential elements of the act—sections 4, 6, 7, and 9. We hope we can avoid a lengthy and protracted battle over weakening amendments. What we see as needed are strengthening amendments.

Thank you, Mr. Chairman.

Senator **Chafee**. Thank you very much, Mr. Parenteau. You can revise or extend your oral remarks in any way. Of course, we have your statement.

Mrs. Stevens, we welcome you back.

STATEMENT OF CHRISTINE STEVENS

Mrs. **Stevens**. Thank you, Mr. Chairman.

Senator **Chafee**. It is like old times to have you here.

Mrs. **Stevens**. Old times, and I hope this is going to work as well as the Lacey Act amendments which we supported.

Senator **Chafee**. We call it the Stevens Act.

Mrs. **Stevens**. Hardly.

I would just like to submit my statement.

Senator **Chafee**. Certainly.

Mrs. **Stevens**. I will say, since you mentioned that nobody has a kind word to say for the International Convention Advisory Commission, I would like to say that kind word. As you know, it was placed under the Department of Interior on the theory that it had not been accountable before and had to become that way. But originally having been in ESSA, ICAC was put under the Department of Interior, now completely unfunded, and the next step is, "Let's kill it altogether." Obviously there is some kind of prejudice against this independent point of view. We believe even though it has no funding the meetings are very well worthwhile. They bring in expertise from such agencies as the Department of Agriculture, NIH, the Smithsonian, keeps them advised of what is happening, and it is an independent scientific body reviewing what is happening with the Convention on International Trade in Endangered Species. To abolish it would seriously impair our Nation's ability with respect to the scientific objective in carrying out our treaty obligation.

I would like to say a little more about CITES as it affects the bobcat, which you can see is the animal in the spotlight at the moment.

CITES actually applies to vulnerable species for which available data suggests that continued take on the current scale will render them threatened with extinction. Now, the most recent numerical information that has been supplied by the Department of Interior is that trapper numbers have increased 21 percent between 1979 and 1980, but the number of bobcats taken did not increase. That is a clear indication that the total population is decreasing. The reason for the increases are not only the licensed trappers, but the unlicensed ones of which there are uncounted numbers and nobody can find out how many.

I compare in my testimony what has been found in the International Whaling Commission. The blue whale became commercially extinct despite the fact that all the while, the Scientific Committee of the International Whaling Commission was advising the nations they were killing far too many blue whales. They did not stop, however, until the largest whaling nation couldn't find any whales at all to kill when they went to Antarctica. To the whalers, it had looked as if there were plenty of blue whales. It looks as if there are plenty of bobcats to a trapper, and the likelihood of vastly over exploiting bobcats at the present time is enormous. A single skin can bring as much as $600. Like whales, there is no investment in raising them; all a trapper has to do is go and catch one. Naturally, it is rather a strong temptation.

Now, on the question of population, it isn't necessary to know exactly how many bobcats there are. That is impossible. However, I would like to submit for the record some pages from the "Wildlife Management Techniques Manual," both 1969 and 1980, which state, for example, "The methods of estimating numbers of animals have now achieved a level of sophistication worthy of a mature science."

[The information referred to follows:]

[From Wildlife Management Techniques Manual, 1980]

CHAPTER 14.—ESTIMATING THE NUMBERS OF WILDLIFE POPULATIONS

INTRODUCTION

The material presented in this chapter is designed for a wildlifer starting an investigation that requires a knowledge of how many animals are present either now or in the future. It is intended for a person located somewhere in the field who lacks an extensive library and sophisticated computers, although such aids are available with a little effort and planning. The person should examine the methods presented here, try the ones that seem most appropriate, consult with whatever specialists are available, and decide after a few months of trial, whether or not (a) any type of census is necessary for his investigation, (b) these simple methods satisfy his needs, or (c) specialists in census methods should be consulted. Additional help in these decisions may be obtained in the voluminous literature on methods, some oriented for a species and others for the topic. Thus, this chapter is a manual for use in estimating wildlife populations rather than a review of research.

The methods of estimating numbers of animals have now achieved a level of sophistication worthy of a mature science. Conceptually the methods have gone from simple counts to complex relations, involving numerous assumptions. Technically the calculations have progressed from pencil and paper to computer. The recent literature is vast and much of it highly mathematical. For example, the excellent article (Eberhardt 1978a) on transect methods can not be abstracted here but must be examined in the journal. This chapter will attempt to achieve 2 objectives: (1) present the conceptual basis for census methods, and (2) describe a few methods in sufficient detail so that with a little effort the field worker can follow them. It would be desirable to include specific instructions for carrying out a census, much as is done in the standard laboratory manuals for bacteriology or engineering subjects. Unfortunately, it has been necessary to refer the reader to original literature for these details.

[From Wildlife Management Techniques Manual, 1969]

CHAPTER 21.—ESTIMATING THE NUMBERS OF ANIMALS IN WILDLIFE POPULATIONS

The many and diverse schemes for estimation of population numbers and density fill a voluminous literature that cannot possibly be completely treated in a single chapter in this manual. The writers have attempted to assemble these methods into a coherent and orderly treatment and the papers referenced have been chosen to illustrate the development. The reader should be aware that the references represent only a part of the literature and that the cited passages and results represent only a small part of the material in the references cited.

The primary purpose of this chapter is to catalolg standard techniques of population estimation, with instructions regarding their use and limitation.

CHAPTER 22.—POPULATION ANALYSIS

"Animal population analysis" means the process of attempting to determine the structure (i.e., the age and sex composition) of a population and the forces controlling the past and future composition of that population. Populations of wild animals rarely are static—hence the term "population dynamics." Fluctuations of numbers almost invariably are accompanied by changes in structure. In fact, knowledge of the internal workings of a population will ordinarily provide a good notion as to probable future changes in the numerical abundance of that population. Such predictions are the wildlife manager's principal goal in population analysis.

The basic ingredients for a study of any population are birth and death rates, age and six composition, and numerical abundance. * * *

* * * * * * *

One important such check is to be able to compare predictions of population trend based on the "vital characteristics" (i.e., survival and reproduction) with independent measures of population behavior. Such a comparison may be made without estimates of absolute population size; that is, by using an index or relative measure of population trend. However, one of the usual goals in wildlife work is to secure an optimal game harvest. "Kill figures" are estimates of absolute numbers, so working usefully with indices also requires an estimate of absolute population size. Estimating population size is treated in another chapter. Its importance much be emphasized as well as the fact that estimating absolute size can rarely if ever be successfully avoided.

[From Appeals Court Opinion, Feb. 3, 1981]

* * * * * * *

We recognize that, because of the secretive nature of the bobcat's life and behavior, it is difficult to obtain accurate information about the size of the bobcat population. There are indications that techniques for making more accurate population estimates can and may be developed. We do not suggest that the Scientific Authority may base a no-detriment finding only upon some kind of head count of the animals or some other method of measurement that, as a practical matter, would be virtually impossible to make. All the Scientific Authority is required to do is to have a reasonably accurate estimate of the bobcat population before it makes a no-detriment finding. The Scientific Authority has considerable discretion to determine the method by which that estimate may be made and in evaluating its reliability.

* * * * * * *

Mrs. STEVENS. I think there is no question that adequate information on populations can be achieved. You have to know so that you don't allow any population to go down too low. That is all the court wants. And I will submit the exact wording of the court order. (See p. 255.)

I would also like to make clear that the Society for Animal Protection legislation is not antihunting, and it is not antitrapping, though we stongly oppose use of the steel jaw leg hold trap which we think is abominably cruel and totally unnecessary. But we are not objecting to the capture of fur-bearing animals. Nobody has to get paranoid about it. I had a feeling listening to testimony this morning that the implication of what was happening had to do with ending hunting and trapping, so I want to make our position crystal clear it does not.

Just to go back to population, the International Whaling Commission, which allowed the blue whale to sink to commercial extinction, nevertheless regularly produces population estimates from its scientific committee so that the commissioners can exercise judgment. That same amount of information should be available to the Federal Government with regard to bobcats.

Other members of the cat family in the United States have been extirpated from enormous parts of their former ranges. Jaguars are extinct in our country; jaguarundis, margays, and ocelots are rare. The Florida panther is teetering on the brink of extinction. I know people who formerly observed bobcats regularly but who practically never see bobcats any more.

I would like to submit for the record an article in the "Smithsonian" of June 1981 entitled "Following the Shadowy Trail of the Cat That Walks by Itself," by Hope Ryden. (See p. 261.) It gives references to specific studies on the survival of young bobcats. It is not easy to bring the bobcat population back once it has been too far depressed by trapping.

Vocal though trappers' organizations are, it is of interest to note that 79 percent of the American public is opposed to the use of steel traps to capture animals. That is from a study funded by the U.S. Fish and Wildlife Service. When the victims are a species whose status is threatened with extinction and listed on CITES appendix II, this large majority opinion would be further reinforced and increased. The public does not want to have protection weakened for a threatened American mammal taken by a painful method and sold for luxury fur coats. Indeed, it is hard to think of anything that would be more unpopular with the public. But by far the greatest reason for not weakening the act in the several ways bobcat exploiters propose is to insure that the bobcat populations that still exist are maintained.

Mr. Chairman, the rest of my testimony relates to the 10 points made by the Department of Interior, and I think perhaps given the time I will let them go into the record, but just wish to express our very strong support for the act without weakening it.

Senator CHAFEE. Thank you very much, Mrs. Stevens.

Let me ask you this, Mr. Parenteau. You heard the testimony from Mr. Boynton earlier in which he said that these endangered species are often listed on the bases of inadequate scientific information. He cited the proposal to list the Illinois mud turtles as an example and stated what a horrendous problem that proposal imposed on one of the companies. Now, what is your answer to that?

Mr. PARENTEAU. I guess I have a couple of answers. First of all, the point I made earlier I think I will just reiterate, and that is if you want to have quality scientific bases in the process then fund the agency at an adequate sum so they can produce the scientific evidence.

Senator CHAFEE. Well, the funding we are dealing with is just going into effect, that is, the reduced funding level. Are you saying that the $24 million, with $20 million for the Fish and Wildlife, or the Federal part of it, is inadequate?

Mr. PARENTEAU. I would say it is inadequate, and furthermore, I can say we can demonstrate to this committee the cuts in the Endangered Species Office are disproportionate within the Department of the Interior. We can find the money to fund endangered species in other areas—for example, water projects proposed by the Bureau of Reclamation. But the first thing is to take a hard look at the budget and see if it is funding the existing program in an adequate manner.

The second thing I would say is it is not unusual for a business like Monsanto to spend a lot of money attempting to show that the mud turtle wasn't threatened, and shouldn't be protected under the act. I don't think it is too unusual it would spend that money, and the publicity benefits they got are worth the money. I have seen their lengthy articles praising to the heavens what they have done for the mud turtles, and I think the $500,000 was probably a wise investment in corporate public relations.

Senator **Chafee**. But getting back to the issue, you say that the reason that there is not more scientific basis for the listing of species is financial. It seems to me that the problem is that sometimes you just don't know what is a scientific basis. You can beat this horse for a long time and nothing is ever really definitive.

Mr. **Parenteau**. It always comes down to judgment.

Senator **Chafee**. It is a judgment call.

Mr. **Parenteau**. It is. That is why this Congress calls the result of the consultation process a biological opinion, because in the end it is the opinion of the experts, and at some point you have to pick the experts, and this Congress has picked the Fish and Wildlife Service. And I don't think you evaluate one case in isolation, you evaluate the full range of the exercise of their responsibility to see if they are, overall, carrying it out reasonably, and I think they are.

The other thing I would say, since the question was opened, Mr. Boynton's comment about amending section 7 to put in a standard insure as far as practicable, we would adamantly oppose that sort of wishy-wash dilution of a crystal clear section. Insure is what this Congress meant and that is what should be retained. To put as far as practical in there is going to spawn any number of conflicts and controversies and lawsuits that we don't need. The process is working. The language insures that species will be preserved without stopping projects. That is the point I tried to make.

Senator **Chafee**. Mrs. Stevens, do you have anything you wish to add, or do you concur?

Mrs. **Stevens**. I do. I would just like to add a little bit about the convention because I think that is so very important, and it is the convention that was written here in Washington. We were the leaders and in the beginning we remained the leaders. But at the last two meetings the United States has begun to be considered a backslider, and it is actually the undeveloped nations who are supporting strong positions on the part of the convention. So it is becoming, to be frank, somewhat embarrassing to be an American.

Senator **Chafee**. Well, you attended the last CITES meeting.

Mrs. **Stevens**. Not the last one. I went to the one in Costa Rica, and Fran Lipscomb of our staff went to the one in New Delhi. It was there that the parrots were listed on appendix II by an overwhelming majority, with only the United States and very few other people holding back. And then there was a question whether a reservation would be filed, which would have been incredibly embarrassing to this country, after the world in general—there are 75 members of CITES—said we do want psitacine birds listed because there is so much poaching and smuggling. Listing helps the nations that have the populations of birds to keep track of them, and it is very hard for many of those nations to do that.

Senator **Chafee**. I have to spend some time on this CITES business, but I must say from a quick overview of it, it seems to me this business of taking reservations—if we take reservations, then others will, and the treaty becomes a nullity. Even though the treaty may not do everything we want every time, it seems other countries would be under far greater pressure, for example, the undeveloped countries, to take reservations than we would be. So, I am skittish of this business of our taking reservations all the time. But, in all fairness, I have to learn more about that.

Senator Mitchell?

Senator MITCHELL. Thank you, Mr. Chairman.

Mr. Parenteau, I wanted to say you made a reference to 1982 being the bicentennial year of the bald eagle. Since Senator Chafee and I are cosponsors of the resolution, I want to report to you this morning the resolution has been acted on favorably.

Mr. PARENTEAU. Forgive me for the oversight for not mentioning that.

Senator CHAFEE. Senator Mitchell was wrestling with that bird on the steps of the Capitol.

Senator MITCHELL. I was going to say, Mr. Parenteau, you have already done enough of a favor by getting my picture taken with the American bald eagle. Senator Chafee, you have been in Congress longer than I have and wisely had another engagement. As a consequence, Mr. Parenteau, I came closer to being an endangered species than the American bald eagle.

Mr. PARENTEAU. You will be happy to know we have abandoned plans to use that as the foldout in our magazine.

Senator MITCHELL. That part I would not have minded.

I would like to talk about a couple of subjects that came up in your responses to Senator Chafee's questions. First, on the level of funding, I ask you specifically what I asked previous witnesses, do you believe this act can be effectively and meaningfully enforced at the level of funding recommended by the administration, that is, $14 million?

Mr. PARENTEAU. Absolutely not. I don't have a number for you. We can work one up and provide the justification. That number is clearly too low.

[The information referred to follows:]

pg. 112 Re: Budget Cuts

Our greatest concerns are disproportionate cuts in listing (58%) and Section 6 grants (100%). Both of these activities are essential to a successful endangered species program; we urge that both activities be restored to levels equal or greater than those proposed under the previous administration. Our recommendations would bring the final budget for the Office of Endangered Species to 20.731 million dollars; by comparison the Administration's second request of September, 1981 was for 13.177 million dollars (see attached).

I. Listing

Carter FY'82:	3.443m
Reagan 1 :	1.957m
Reagan 2 :	1.605m
Present :	1.957m
Recommended :	4.6m

Justification

The following areas within the listing program were either severely reduced or else completely eliminated through the budget process. Because all are vital to a viable endangered species program, we recommend that funds be restored as indicated.

A. Economic Contracting Studies (1.0m)

Provides economic data, now required by E.O. 12291, on actions that involve endangered species.

B. Status Surveys for Unlisted Species (2.5m)

These surveys are necessary to identify candidate species for listing that states have neither the personnel nor funds to conduct.

C. Personnel (0.3m)

Half of the Washington office has been relocated to regional offices. Many of these biologists, who were supposed to work on listing, instead have been placed on recovery. Furthermore, the Washington office has lost its botanist, entomologist, two economists, and three clerical workers. Immediate funding is necessary to restore these crucial positions.

D. Endangered Species Information System (o.4m)

Responding to strong recommendations provided in a 1978 GAO report, OES was preparing to bring a computer information retrieval system on line. Designed to provide FWS and other federal agencies with data on endangered species instantaneously and expedite work on all aspects of endangered species, the program now has been placed on "hold".

E. Miscellaneous (0.4m)

Money used to conduct public hearings, publish notices in local newspapers and the Federal Register, as well as perform a myriad of other services has been drastically curtailed. To ensure continued public participation and input, as required by the Endangered Species Act, it is essential that these funds be completely restored.

II. Section 6 Grants

Carter FY'82: 3.920m
Reagan 1 : 0
Reagan 2 : 0
Present : 0

Recommended : 4.0m

Justification

The results of §6 grants that provide states with money to research and manage endangered species are an outstanding example of one of the more successful state-federal cooperative agreements. In previous testimony we cited the number of endangered species that have benefitted from §6 programs. For the past six years Congress has appropriated §6 funds, yet the current Administration now proposes to eliminate the program entirely. The impact this budget cut would have on state efforts to protect and restore endangered species cannot be stressed too strongly; several states have already had to terminate contracts and release personnel that would have been funded by §6. Deleting these funds and effectively dismantling so many successful state programs runs counter to the Administration's desire to return management to the states.

Although the previous Administration's request of 4 million dollars for §6 monies is inadequate (with 38 states having cooperative agreements, this is slightly more than $100,000 per state), it is far better than zero funding. NWF urges that Congress recognize the importance of §6 activities and immediately restore funding to 4 million dollars for FY'83.

OES Budget*

(in 1,000s)

Activity	FY '82 Carter Requests (19 January 1981)	Reagan 1 Request (March 1981)	Reagan 2 Requests 12% Cut+ (September 1981)	Congressional Allowance: FY '82 (November 1981)	Signed by Reagan Approx. Overal 4% Reduction (December 1981
Listing	3,443	1,957 (-1,486 or 43%)	1,605	1,957	~1,897 (-1,546 or 45%++)
Protection (Enforcement)	5,761	4,618 (-1,143 or 20%)	3,995	5,618	~5,393 (-368 or 6%)
§7 Consultation	2,380	2,413 (+33 or 1%)	2,069	2,413	~2,317 (-63 or 3%)
Recovery	7,494	6,067 (-1,427 or 19%)	6,067	7,892	~7,576 (+82 or 1%)
§6 Grants	3,920	0 (-3,920 or 100%)	0	0	0
Other	-	0	-559	415	~398
Total	22,998	15,055 (-7,943 or 34%)	13,177	18,295	17,563 (-5,435 or 24%)

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* Telephone conversation, Elliot Sutta, Federal Assistance.
+ Completely changed by Congress.
++ Compared to Carter FY '82 requests.

Senator Mitchell. Mrs. Stevens—I would like to ask these questions of both of you—do you agree?

Mrs. Stevens. I agree with that, and I think it is particularly important to have adequate money for enforcement of the act.

Senator Mitchell. You also made a statement, Mr. Parenteau, which was in the nature of criticism. You said there hasn't been a single listing this year. That, of course, is significant only in relation to prior years. Could you put that in a more meaningful context for me?

Mr. Parenteau. Yes. In calendar year 1980 there were 21 species listed, while in 1981 there were only 4 species listed (see following table). One of these 4 species, the Hawaiian tree snail, includes some 41 subspecies, of which 19 are believed extinct. So the administration may count all those subspecies, including the extinct, and come up at the end of the year and say we have listed 44 species. But that is misleading. The 21 species listed in 1980 was far more than the 4 listed this year, and that was not a particularly exemplary year.

[The table referred to follows:]

No. Species Listed Since ESA of 1973 (Calendar Year)

	1973	1974	1975	1976	1977	1978	1979	1980	1981*	Total
Mammals	158	3	2	85	1	1	28	1	0	279
Birds	169	0	3	36	3	0	1	0	0	212
Fish	39	0	3	2	5	2	1	4	0	56
Reptiles	27	0	1	27	4	6	4	8	0	77
Amphibians	6	0	0	7	2	0	0	1	0	16
Insects	0	0	0	8	0	0	0	5	0	13
Snails	1	0	0	0	0	7	0	0	1	9
Mussels	0	0	0	24	1	0	0	0	0	25
Other	0	0	0	0	0	1	0	0	0	1
Plants	0	0	0	0	4	18	36	2	3	63
Total	400	3	9	189	20	35	70	21	4	
								Grand Total		751

* The effective dates for these 4 species listings took place after 20 January 1981.

Senator Mitchell. What was the zero figure?

Mr. Parenteau. The zero figure is new listings. In other words, the Hawaiian tree snail and others that have been listed in 1981 were carryovers from 1980. No new proposed listings have been made this year.

Senator Mitchell. Now you answered the question I was going to ask about Mr. Boynton's recommendation, an amendment to Section 7, and your testimony was very good. But I must say I think your answer to the Illinois turtle thing was really inadequate. Whether or not Monsanto got $500,000 worth of publicity in a particular case isn't really responsive to the question of how did that happen, and I think more significant, is that a common occurrence? If someone wanted to indict a piece of legislation and brought up a single example of human error, let's assume a mistake was made, that would be one thing and we could say, well, no institution, no human institution is infallible, and that is not so bad. I guess I have a broader question. What did cause something like that? Was that a mistake in the process? Is that a common occurrence? Give me a little broader evaluation of that aspect of it and how likely that is to occur.

Mr. PARENTEAU. Well, if you have ever had any dealing with Ph. D. herpetologists, you would know that—and I don't mean to be flip——

Senator MITCHELL. I never have had any dealings.

Mr. PARENTEAU. The problem is that scientists are highly independent in their views about something as subjective as to whether a species is endangered or not. And having presented several expert witnesses in endangered species cases, I can testify myself to the difficulty of getting two of them to agree. One of the problems we have, you are always going to have two or three scientists with excellent credentials disagreeing with scientists with equally excellent credentials. It is a battle of Nobel laureates, if you will. That is a significant problem with a subjective judgment, as the chairman recognized, about whether a species is truly endangered and, for that matter, as to whether a habitat is truly critical. That is an endemic problem. Senator Mitchell, you are absolutely right in saying what needs to be looked at is whether there is consistent pattern, or at least several episodes, involving serious disagreement over the scientific validity of particular listings. I didn't mean to suggest that was not a proper area for the committee to look into. We will look into it ourselves.

Senator MITCHELL. I wish you would because I think a significant point of criticism has been made of the act. One of the objectives of criticism is specifics. Mr. Boynton was specific. He cited a specific case. And if you disagree, I would like to have you address the substance of his criticism. What happened? And assuming that what happened produced an improper result, does that represent a final indictment of the system that produced the result, or is that merely what one can expect in an area of uncertainty. I would like to have a more substantive response. I don't expect you to do it now. Perhaps you could submit it. I would like to tell you right now I am going to send it to Mr. Boynton and see what he thinks so we can refine, so we can have some meaningful and substantive presentation of that on both sides.

Mr. PARENTEAU. Excellent. We will do that. I would like to keep separate the point Mr. Boynton raised that there is not good scientific evidence for listing; the other is that section 7 needs some treatment.

Senator MITCHELL. I understand that, and I understand you have already discussed your view on when there is insufficient scientific evidence for listing, you have an automatic out, the middle course which you have recommended.

Mr. PARENTEAU. That is right. That has to do with consultation.

[Responses from Mr. Parenteau and Mr. Boynton follow:]

FROM MR. PARENTEAU RE: THE ILLINOIS MUD TURTLE

Disputes, such as those involving the Illinois mud turtle, are the exception in the process of listing a species. While we are developing a thorough and documented response to Mr. Boynton's testimony, our intitial findings suggest that the attempted listing of the mud turtle by the Office of Endangered Species was credible and scientifically justified. In support of this statement is the finding that in every State where it occurs, the mud turtle has been listed as endangered by the appropriate State management authority.

STEPHEN S. BOYNTON
ATTORNEY AT LAW
1050 SEVENTEENTH STREET, N.W.
WASHINGTON, D.C. 20036

CABLE:
BOYTOP, ARLINGTON, VA.
(703) 243-1087

REPLY TO:
1901 N. FT. MYER DRIVE
SUITE 1204
ARLINGTON, VIRGINIA 22209

January 8, 1982

Senator John H. Chaffee, Chairman
Subcommittee on Environmental Pollution
U.S. Senate
61 Capitol Hill Annex
Washington, DC 20510

RE: Endangered Species Act

Dear Senator Chaffee:

At the oversight hearings on the Endangered Species Act there was considerable comment concerning my testimony on behalf of the American Fur Resources Institute related to the proposed listing of the Illinois Mud Turtle as an endangered species by the U.S. Fish and Wildlife Service [T.R., pp. 61, 107-109, 113-115 (Dec. 8, 1981); TR., pp. 33-34, 39-44 (Dec. 10, 1981)]. Senator Mitchell requested that I submit a "substantive response" to the issues concerning the Illinois Mud Turtle. (Kinosternon flavescens spooneri) [TR., pp. 115 (Dec. 8, 1981)]. The following is intended to fulfill that request. Since I represented Monsanto Company during the period when the Illinois Mud Turtle Was being proposed for listing, I am thoroughly familiar with the background.

In July 1978 the Fish and Wildlife Service proposed "to determine the Illinois Mud turtle to be an endangered species and to identify critical habitat for this species." 43 Fed. Reg. 21152 (July 6, 1978). For seventeen years, Monsanto Company, one of the largest chemical companies in the United States, had a plant in Muscatine, Iowa in the area of the Big Sand Mound which was to be designated as a critical habitat for the turtle. The plant is a particularly important facility for the manufacture of various crop protection chemicals used by world farmers to increase food and fiber production. It is situated on approximately a 500-acre site adjacent to the Mississippi River and seven (7) miles from the community of Muscatine. Approximately 130 acres of the site currently are devoted to manufacturing operations. The plant employed 530 people.

In view of the expressed concern, Monsanto quickly recognized that the information presented by the Fish and Wildlife Service demonstrated that there was clearly insufficient scientific data to designate the turtle as "endangered" or to decide what represented the best approach for long-term management of the habitat area.

In an attempt to gather scientific data on the turtle, Monsanto commissioned a comprehensive scientific study to determine whether or not the turtle was truely endangered and whether the critical habitat proposed was valid. The company also initiated a series of steps to assure the immediate protection of the turtle until those questions could be resolved.

Scientists from the academic community, state conservation departments and the U.S. Fish and Wildlife Service were asked to participate in a planning and an advisory capacity for Monsanto. The company also retained LGL Ecological Research Associates, a firm noted for its work in the field of ecology for such clients as the U.S. Fish and Wildlife Service, U.S. Corp of Engineers, U.S. Bureau of Reclamation, National Marine Fisheries and others. This Texas-based organization of environmental specialists is perhaps the world's foremost in its field.

While study was undertaken, Monsanto developed and implemented an action plan to enhance the immediate protection of the turtle including:

a) that a dike be constructed to control waters that might injure the turtle or adversely alter its environment;

b) that a mud flat, which posed an environmental trap for the turtle, be filled;

c) that since raccoons and skunks are predators that destroy an estimated ninety (90) percent of turtle hatchlings found in the habitat area, upon recommendations from ecologists and the Department of Interior these predators were captured and relocated to more distant areas; and

d) that since a lake, thought by scientists to be vital to the turtle's existence, was found to have a dangerously low water level, Monsanto brought in a barge and pumped nearly 80 million gallons of water into the lake to help assure a more favorable environment and prevent possible winter kill of the turtles.

In addition to this series of immediate actions, Monsanto also voluntarily initiated a comprehensive scientific study of the turtle, with the cooperation of over twenty (20) recognized experts. The study, completed in less than two years, represents one of the most thorough of its kind conducted in the United States. The study consisted of three separate phases all of which were conducted simultaneously. These three segments were:

a) that extensive field surveys were undertaken to determine whether other habitats and greater populations of the turtle existed in the three-state area of Illinois, Iowa and Missouri;

b) that a study be undertaken to determine the taxonomic status of the Illinois Mud turtle which was conduced by an academic expert on the subject, and designed to ascertain whether the turtle represented a distinct taxonomic entity as opposed to a disjunct population of a rather common species; and

c) that an intensive and detailed study of the turtle be undertaken at the Big Sand Mound site believing that through the development of a larger data base, a study would provide much needed information regarding the actions and habitat requirements of the turtle. The use of radiotelemetry to track the movements and habits of the turtles was an important part of this study.

Throughout the study phase, all data generated was made available to interested parties on a bi-weekly basis, with plans and results made available to appropriate state and federal officials.

The study produced the following information:

1) that based on one of the most extensive taxonomic studies ever conducted on a reptilian species, the Illinois mud turtle was found to be a separate population of the common yellow mud turtle, which inhabits a wide geolographical area of the United States. This conclusion was supported by a $40,000 study of turtle blood types, detailed studies of nineteen (19) morphological characteristics of the shell, chromosone number, morphology, banding and electrophoretic analyses of proteins from hearts, kidney, liver and eye tissues. Results of this taxonomic study will be published in key scientific journals;

2) that the enlarged data base generated by the study has provided invaluable information on the turtle and methods for assuring its protection; and

3) that search teams uncovered additional new colonies of the turtle in the three-state area of Illinois, Iowa and Missouri, boosting population estimates by more than five times what the U.S. Fish and Wildlife Service had previously calculated.

The quality and thoroughness of the Monsanto commissioned study, which in conjunction with other actions cost over $500,000, was particularly impressive in light of the fact that the company was neither obligated nor required to make such an effort. More importantly, however, it underscored the absence of sufficient data supporting the Fish and Wildlife Service proposal.

In the face of this scientific evidence, the Fish and Wildlife Service was, not only not willing to reconsider its position, but failed to acknowledge its existence and planned to list the turtle as proposed.

After extensive meetings and correspondence with the Fish and Wildlife Service and members of Congress, it was proposed that an independent group of experts review the data of the Fish and Wildlife Service and the data be obtained by the Monsanto Company. The entity selected was the National Academy of Sciences.

The panel of the National Academy of Sciences determined that the scientific information upon which the Fish and Wildlife Service based its proposal "was weak in the adequacy of survey procedures and design." On the other side, the panel found the Monsanto Survey "adequate and comprehensive." Based upon this finding and the scientific data supplied by Monsanto, the Fish and Wildlife Service publicly announced that the proposal to list the turtle would be withdrawn and subsequently published its withdrawl. 45 Fed. Reg. 54112 (Aug. 14, 1980).

I have enclosed a document, Monsanto and the Environment, for your review which summarizes much of the above information.

The major point in detailing this two year saga is that we believe it is incumbent upon the Fish and Wildlife Service in administering the Endangered Species Act to be intellectually honest is acting on the "best scientific and commercial data available..." in making listing determinations. 16 U.S.C.§1533 (b) (1). Recognizing the limitations of personnel and funding, the Act should be administered in a responsible manner. Placing the burden of providing scientifically adequate information to challenge precipitous listings should not be placed upon the private sector. Clearly, this type of action is not the intent of Congress and, consequently, the administration of the Act should not be so interpreted by regulatory implementation.

If you or staff members have any questions concerning the above please do not hesitate to contact me.

Sincerely,

Stephen S. Boynton

Stephen S. Boynton

Senator MITCHELL. Let me ask one final question. You heard Mr. Meyers testify there be a consolidation of listings. Do you agree or disagree? Why hasn't that been done?

Mrs. STEVENS. I think it would be fine. I suppose it costs money, like everything else.

Mr. PARENTEAU. I must confess I was not here or was not listening when Mr. Meyers testified. This is the consolidated listing?

Senator MITCHELL. Yes; he said one of the problems was there are so many lists nobody can be sure of them. On page 4 of his testimony, he has recommended Interior prepare and publish a consolidated list, and I would like your reaction.

Mr. PARENTEAU. We will do that.

[Mr. Parenteau supplied the following opinion:]

The question of whether Interior should consolidate lists of all species according to the laws and/or regulations that are applicable to each goes far beyond the scope of the Endangered Species Act. Such a consolidation would be impractical, burdensome, and costly to maintain and and update.

Senator MITCHELL. I have no further questions. Thank you both.

Senator CHAFEE. Well, thank you both very much for coming. We appreciate it.

That completes the hearing for today.

[Whereupon, at 12:35 p.m., the subcommittee recessed, to reconvene subject to call of the Chair.]

[Statements submitted for the record follow:]

STATEMENT OF ROBERT A. JANTZEN, DIRECTOR, U.S. FISH AND WILDLIFE SERVICE, BEFORE THE SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS, SUBCOMMITTEE ON ENVIRONMENTAL POLLUTION, CONCERNING THE REAUTHORIZATION OF THE ENDANGERED SPECIES ACT, DECEMBER 8, 1981

Mr. Chairman, I appreciate the opportunity to be here this morning to discuss the efforts now underway at the Department of the Interior with regard to the Endangered Species Act (ESA).

Let me begin by discussing briefly the progress that we have made in implementing the amendments to the Act in 1978 and 1979. As you know, the thrust of those changes was in three major areas -- listing, consultation and recovery.

The listing of species as endangered or threatened is the cornerstone of protection and recovery of endangered species program. The listing process is undertaken pursuant to section 4 of the Act. Recent amendments to this section enacted by Congress were intended to increase public input into the listing process, and to insure that listing decisions are made on the basis of the best and most current scientific data.

On February 27, 1980 the Service and the National Marine Fisheries Service published joint final regulations which formalized the requirements of the amendments as they relate to section 4. These regulations generally set forth procedures for listing threatened and endangered species and for determining critical habitat for these species, including public review requirements. Procedures were also set forth for considering petitions, issuing emergency rules, and conducting the congressionally-mandated five year review of listed species.

We have made several changes in our listing procedures which we believe will enable us to implement the Act more effectively. In order to get the listing process out in the field where the plants and animals are located, all regional offices now have staff listing biologists who have major responsibility for preparing listing rulemakings. Model rulemaking packages have been disseminated and workshops have been held to train regional personnel. Public meetings and hearings are now regularly held prior to final rulemaking on critical habitat, and, whenever possible, personal contact is made with private land-owners who may be affected by the listing or critical habitat designations. We have developed a system to log and track listing petitions on word processing equipment, and all petitions are now acted on promptly by the program staff. Memoranda of Understanding have been developed with the Forest Service and BLM which are designed to conserve candidate species without immediately listing. This should allow the Service and other agencies to assist in the recovery of many more species in a timely, more cost efficient manner. A priority system has been developed to ensure that those species facing the highest degree of threat receive priority attention for listing and recovery. In all, since 1978 we have listed a total of 148 species, including 105 endangered, and 43 threatened.

In order to respond to the requirement for economic analysis of critical habitat designations, an economic staff has been added to the Office of Endangered Species and instructional guidelines and training have been carried out so that staff biologists can prepare most analyses. In addition to the requirements by Congress for economic analysis of critical habitat designations, Executive Order 12291 requires economic analysis of all major rules and regulations promulgated by Federal agencies. A similar requirement is contained in the Regulatory Flexibility Act. As a result, some economic analysis is done for all listing packages to comply with requirements of E.O. 12291 and the Regulatory Flexibility Act. This analysis is used for informational purposes only; decisions on listing are made soley on the basis of biological information.

Since 1978, we have undertaken two reviews of previously listed species, and several changes in the status of listed species have been made or are contemplated as a result of the information gathered. For instance, based on more recent information concerning the status of kangaroos in Australia, on April 29 of this year the Service published a Federal Register notice lifting the U.S. import ban on kangaroo products. The Service has also proposed reclassifying the leopard in the sub-Sahara from endangered to threatened.

The second major change made by Congress in the Act was to require the Department to develop a recovery plan for all listed species, unless it is determined that such a plan will not promote the conservation of the species. As of today, we have developed 44 approved plans, 23 agency drafts, and 24 technical drafts. The major portion of the work in this area has occurred since November 1979. The Service hopes to have a least 40 plans submitted for approval in FY 1982.

The recovery planning guidelines were revised in May of 1981, with input from all regional recovery planning staffs. Key changes included the standardization of plan format and of recovery task priorities in order to promote consistency in the recovery efforts among our various regional offices. As in the case of listing, Regional Directors have been given new authority in this area, and now have the ability to appoint, remove, and replace recovery team members. A mechanism for periodic updates and revision for recovery plans has also been implemented.

An important aspect of these changes is the initiation of the "phased" recovery concept, under which plans will focus on the most immediate actions which need to be taken to recover listed species, while more long range actions will be developed at a later time. For instance, the recovery plan for the California condor will address the immediate need for research on limiting factors, while delaying resolution of the question of how much habitat the species needs for recovery 10 or 20 years in the future. This approach will allow for recovery plans to be developed in a fraction of the time that has been required in the past so that they can become working documents as soon as they are developed.

Recovery of species that are the subject of intensive conservation efforts can be dramatic. Naturalists have been concerned for many years that the whooping crane might become extinct. Destruction of habitat was the main reason for decline of this great bird to a total population of less than 15 in 1941. While extinction of the bird for a while appeared to be inevitable, through intensive efforts of the Service and the Canadian Wildlife Service the cranes are making a slow but steady recovery. By 1977 the natural population had increased to 76. By innovative captive propagation and foster rearing programs with sandhill cranes, the natural population has increased to 95 by the winter of 1980. As a result of these efforts, the long-term outlook for the whooping crane is favorable.

The third major change made by Congress in the Act concerned the consultation process under Section 7. The intent of Congress in amending the Act in 1978 and 1979 was to provide for more direct involvement of the Fish and Wildlife Service at the initial stages of Federal planning, so that potential problems could be surfaced at the earliest possible time in order to avoid delays. As a result of changes in the Act and our further experience with consultation, we now believe that the consultation process is going very smoothly in the vast majority of cases. We have been able to develop sets of microfiche for each State and territory which enumerate all listed, proposed, and candidate species, together with their status. These have been supplied to all Service regions and to appropriate Federal agencies, thereby permitting early identification of potential problem areas. Regulations for interagency cooperation under Section 7 were originally published in January of 1978. While new regulations incorporating the changes made in 1978 and 1979 have not yet been published in the Federal Register, we have sent either letters or memoranda to all Federal agencies informing them of changes required by the Act. In February of this year we sent a copy of proposed draft regulations to all Federal agencies for their comment and are now in the process of incorporating their suggested changes into a new version. The changes will greatly reduce any burdensome aspects of the rules while retaining adequate protection for listed species.

The trend since 1978 has been a shift toward more informal consultations rather than the formal consultations used in the past. We feel that this change has been effective in helping us to resolve possible conflicts at an early stage. Since 1979, we have engaged in approximately 2,100 formal consultations, and 7,500 informal consultations. Of these 9,600 consultations, jeopardy has been found in only 154, or approximately 1.5 percent of the cases. Reasonable and prudent alternatives have been developed in the majority of these cases. There have been no applications for an exemption under section 7(h) from the Act since the original Grey Rocks and Tellico exemptions.

Now I will describe the review process that we are undertaking with regard to the Act.

Mr. Chairman, last June we began an effort to collect information concerning the implementation of the Act in preparation for congressional consideration of reauthorization legislation. In August Vice President Bush announced the second list of existing regulations to be reviewed pursuant to the regulatory reform effort being taken under Section 3(i) of Executive Order 12291. This list included the Endangered Species Act. Accordingly, the decision was made to combine the reauthorization preparation and regulatory review into one effort.

On September 18, 1981 the Service published in the Federal Register a notice requesting comments on the Act. Letters transmitting this notice and copies of E.O. 12291 were sent to Federal agencies, State fish and game agencies, and private organizations. We have also met with industry groups, environmental groups, and congressional staffs to identify and discuss issues.

The comment period officially closed October 16, 1981. We have summarized all the comments received in response to the Federal Register notice as of November 27, 1981. A summary of those comments will be provided for the record.

While we were gathering public comments, we also requested the assistance of the Regional Offices in gathering data and statistics on how various sections of the Act have been functioning. This factual data, which related to items such as Section 7 consultations and recovery efforts, will be helpful to us in analyzing the comments we received. Other Federal agencies have submitted copies of their regulations, agreements, directives, etc., relating to the ESA, which are also being considered.

Based on the comments that we received, priority issues have been identified and a listing of these appears in a press release dated November 10 Issues assigned a lower priority included those issues which are less significant and can be resolved through policy changes and others which were simply information gathering topics to prepare us better for questioning during upcoming reauthorization hearings.

Mr. Chairman, since we are still in the analysis stage of our review, I am not prepared at this time to offer specific recommendations or options concerning the need for amendments to the Act. I would, however, like to identify for you several major issues which we are reviewing.

The first is whether it is desirable to continue to designate critical habitat. As you know, section 7 prohibits Federal agencies from destroying or adversely modifying habitat determined by the Secretary to be critical to an endangered or threatened species. As a means of identifying these areas to affected agencies, the Service, in implementing the 1973 Act, developed regulations identifying "critical habitat". The rationale behind these designations was that if a Federal action agency was aware of where these important areas were located, it could take care to either avoid them or to conduct necessary actions in a manner which avoids damage. Congress codified this concept in 1978 when it amended the Act to require critical habitat to be designated "to the maximum extent prudent" at the time a species is listed.

The concept of critical habitat has often been perceived by the public as tantamount to the designation of an inviolate preserve, which would forbid or curtail all human activities in the designated area. Because of this preception, there has often been strong resistance to the designation of critical habitat by local residents and commercial interests. In response this concern, Congress in 1978 required that an analysis be performed prior to the listing of critical habitat to determine the economic impact of the designation. As a result of public resistance and the analysis requirements of the 1978 amendments, critical habitat designation has added significantly to the complexity of the listing process.

Some commentors felt that due to these problems critical habitat should be eliminated, while others felt that it should be retained. Thus, one of the issues that we will be considering as a result of the comments is whether there should be a different method of protecting habitat needed for critical life stages, such as nesting habitat for sea turtles or migratory birds, while at the same time alerting Federal agencies and the public to the existence of this habitat.

A second issue which we are examining concerns whether economic considerations should be addressed in the listing of species. Section 4(b) of the Act currently requires the Secretary to evaluate the economic impacts of designating critical habitat. He is authorized to exclude an area from critical habitat designation if he determines that the benefits of the exclusion outweigh the benefits of the designation, provided that failure to designate the area does not lead to the extinction of the species. A number of comments that we received expressed the view that a similar balance between economic and biological needs should be applied to the listing of species. Others disagree and felt that economics should not be applied at all to listing, or that it should be applied only during the exemption process.

Another issue upon which we received comments was the exemption process. Some expressed the view that the current process is too time consuming. Others felt that the process should not be changed inasmuch as it has never been used. We are currently looking at the exemption process to determine if changes are warranted.

A fourth issue which we are reviewing is whether there should be a procedure under the Act for listing a special category of experimental populations of fish, wildlife and plants. One of the most effective means for achieving the recovery of a species is through reintroduction into its historical range. The whooping crane is one outstanding example. Reintroduction is also one of the most difficult recovery tasks to implement, however. Several states expressed concern that since the Act does not treat experimental populations differently than wild populations, state wildlife and land management options available in an area where reintroduction has occurred would be altered or eliminated. The concern has also been expressed that the Service may use reintroduction to declare critical habitat and remove state management prerogatives. Consequently, some states are reluntant to approve reintroduction. Thus, we are reviewing suggestions for an "experimental" category for reintroduction of listed species.

Another issue that is of great concern to the states is the effect of CITES on their fish and wildlife management programs, as exemplified in the bobcat situation. As you know, Mr. Chairman, the bobcat, lynx and river otter were included under Appendix II of CITES under broad listings of entire families of species. Therefore, although these animals are not listed as threatened or endangered in this country, CITES requires the Scientific Authority to issue a "no detriment" funding before they can be exported. Originally the Scientific Authority felt that there was unsufficient data to make such a finding and proposed a complete ban, but later agreed to permit exportation on a quota basis. Subsequently it was decided that if a State had developed an adequate management program for these species, export would be allowed without limit.

At least from a philosophical stand point, this decision, especially with regard to the bobcat, is unacceptable to many states, who feel that the Federal government is interfering with their management prerogatives for resident species. This was particularly true since most states felt that the bobcat should not be listed under CITES at all. On the other hand, some conservation groups feel that the Federal government has not done enough under CITES to protect bobcat populations. Defenders of Wildlife has sued the Department to invalidate the Scientific Authority's findings on bobcat exports. The District Court placed an injunction on exports for this harvest year until the Scientific Authority can show that it is basing findings on reliable population estimates. The matter is presently pending before the court. Thus, the effect of CITES on states managment programs is another issue we will be examining.

In addition to addressing concerns raised by the public, we will be examining the general implementation of the Act by the Service and NMFS in order to ensure that our procedures are consistent.

We feel these issues and others that have been raised warrant fu[illegible] examination. Accordingly, the Service is preparing an analysis [illegible]he comments received and will evaluate a full spectrum of options for addressing these comments. These options will range from no change, to policy revision, to regulatory revision, to statutory change. Data were gathered in order to fairly evaluate the pros and cons of each option. Policy decisions on these issues have not yet been made within the Department. When these decisions are made, care will be taken to give primary consideration to the resource, to be responsive to public comment where possible, and to always evaluate the factual record. Ultimately, the Department's recommendations will be forwarded to OMB for review within the Administration.

Mr. Chairman, according to our current schedule, the Administration should be prepared to make recommendations to Congress concerning the need for statutory changes in the Act by early next year. I look forward to having the opportunity to come back at that time and discuss our recommendations fully with you.

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SUMMARY OF COMMENTS RECEIVED IN RESPONSE TO SEPTEMBER 18, 1981, FEDERAL REGISTER NOTICE

Includes all comments received through November 3, 1981
Comment period ended October 16, 1981

Many other comments, which were not tallied here, were considered. Comments submitted to the White House and the Department during the transition period and also in response to requests from the Secretary for suggested changes were all collected and analyzed. Comments from Regional Offices were utilized and recent unsolicited comments from the public were also considered.

SUMMARY OF COMMENTS

	Comments which favored an Act w/stronger protection for resource	Comments which support the Act as is	Comments which suggest technical changes while still providing current protection to the resource	Comments which favored an Act providing less protection to the resource	Comments which were more general and difficult to categorize
SOURCE OF COMMENTS	A	B	C	D	E
Federal Agencies			4		
State Agencies	5	17	7		1
Private Organizations					
Academic	1				1
Conservation	4				1
Industry/ Agriculture	1	1	1	2	3
Other	1		3		
TOTAL	12	18	15	2	6

FEDERAL AGENCIES — SUMMARY OF COMMENTS — (page 1 of 2)

Letters Sent To	Contacts Designated	Regs./and or other info Received	Recommendations Received	A	B	C	D
DOA/APHIS	X	X					
DOA/FS	X	X	X			X	
DOA/SCS	X	X					
DOA/REA							
DOC/NOAA DOC/NMFS	—Participating in the review						
DOC/EDA	X	X	no recs.				
DOD/AF	X	X	no recs.				
DOD/ACE							
DOE/FERC	X	X					
DOI/BIA							
DOI/BLM	X	X thru AS-LW					
DOI/OSM	X						

FEDERAL AGENCIES SUMMARY OF COMMENTS (page 2 of 2)

Letters Sent To	Contacts Designated	Regs./and or other info Received	Recommendations Received	A	B	C	D
DOI/BM							
DOI/BR		X thru AS-LW	X (Aug. recs.)			X	
DOI/GS	X	X	X			X	
DOI/NPS	X						
DOS-replied as a Dept.	X	X	no recs.				
DOTrans.-replied as a Dept.	X	X	X			X	
DOTres./CS	X	X	no recs.				
CEQ	X						
EPA	X	X					
NSF	X						
NRC	X	X					
TVA	X	X					
TOTALS 25	19	15	4	0	0	4	0

STATE AGENCIES SUMMARY OF COMMENTS (page 1 of 2)

State	Regulations and Info Received	Recommendations Received	A	B	C	E
AK	X	X			X	
AZ		X			X	
AR	X					
CA		X	X			
CO		X		X		
FL		X		X		
GA	X	X				X
HI	X	X			X	
IA	X	X			X	
ID		X			X	
IL	X	X		X		
IN		X		X		
KS	X	X		X		
LA	X					
MI	X	X		X		
MO	X	X		X		
NJ	X	X	X			

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[illegible] SUMMARY OF CONTENTS (page 2 of 2)

State	Regulations and Info Received	Recommendations Received	A	B	C	E
NE	X					
NV		X		X		
NH		X		X		
NM		X		X		
NY	X	X		X		
NC	X	X		X		
ND		X		X		
OH		X		X		
PA	X	X	X			
SC		X	X			
TN	X	X		X		
TX	X	X			X	
VA	X	X		X		
WA	X	X	X			
WI	X	X			X	
WY		X		X		
TOTALS 33	20	30	5	17	7	1

STATE COMMENTS

Alabama

—Urged retention of ESA and acceptance of its provisions by development interests; urged that all benefits of resources and ecosystems be considered in benefit/cost analysis under Executive Order 12291.

* Alaska

—Detailed problems of dealing with CITES documentation regarding export of legally taken brown bear, wolf, lynx, and otter from the State; urged that Alaskan populations of these species be removed from Appendix II; expressed concern that ESA has been misused; urged that the listing process be legitimate; urged greater State involvement, particularly with regard to "similarity of appearance cases."

Alaska

—Supported delisting of Alaskan brown bear, lynx, river otter, and gray wolf under CITES; recommended that State sealing program be accepted as meeting terms of Article IV of CITES.

* Arizona

—Urged that States be given clear authority to manage resident species; recommended consultation with affected States regarding CITES implementation; urged removal of bobcat from Appendix II of CITES.

Arizona

—Affirmed the importance of ESA, particularly Section 7; urged provision be made to allow transplant and re-introduction of listed species.

* Arkansas

—Criticized administration of ESA in relation to State cooperation and permit issuance.

* California

—Strongly supported ESA; recommended:

1. Development of firm funding for Section 6.
2. Streamlining of listing process to facilitate listing of species.
3. Assurance that habitat destruction will continue to constitute "harm."

California

—Affirmed that ESA is an "essential tool" in maintaining viable fish and wildlife populations.

* Colorado

—Disputed the appropriateness of NEPA compliance on actions taken under cooperative agreement.

Colorado

—Urged retention of ESA; supported streamlining so long as it does not lessen protection.

Florida

—Strongly supported retention of ESA, particularly its prohibitions of Federal involvement in adverse impacts on resources.

* Georgia

—Expressed concern that Federal authority has inappropriately overridden State management authority for resident species (e.g., under CITES).

Guam

—Opposed designation of Critical Habitat concurrent with listing as cumbersome and counterproductive; recommended increased State flexibility in setting priorities under Section 6 cooperative agreements.

* Hawaii

—Opposed designation of Critical Habitat for Hawaiian monk seal in Leeward Islands.

Hawaii

—Suggested definition of "harass" in the definition of "take" to avoid arbitrary interpretations.

Idaho

—Strongly supported retention of ESA in its present form and adoption of strong implementing regulations; urged revocation of Interior's delegation of authority to ICAC.

Illinois

--Supported retention of ESA in present form, with following modifications:

1. Extend definition of "take" to plants.
2. Define certain terms used in Section 7.
3. Increase amounts of penalties and awards in Section 11.
4. Update authorization of appropriations in Section 15.

Indiana

--Supported retention of ESA with streamlined compliance procedures (presumably under Section 7).

Kansas

--Strongly affirmed importance of ESA and opposed any weakening.

* Louisiana

--Urged greater State involvement under CITES; complained of delays in permitting and reclassifications; advocated removal of bobcat and river otter from Appendix II.

Louisiana

--Indicated that State's recommendations would be incorporated into IAFWA comments.

Maine

--Supported continuation of ESA; suggested possibility of consolidating NEPA, ESA, and FWCA procedures if essential features of each act were preserved.

* Michigan

--Supported removal of bobcat and river otter from Appendix II of CITES; urged revoking of Interior's delegation of authority to ICAC.

Michigan

--Suggested that State Endangered species program provide Section 7 consultations under its cooperative agreement; urged more involvement by biologists in project review; supported retention of ESA in its present form.

* Mississippi

--Opposed U.S. adherence to treaties that may tend to shift management authorities for U.S. species to international bodies.

Missouri

—Oppposed any weakening of ESA or its implementing regulations; expressed particular concern for Section 6.

* Montana

—Disputed listing of grizzly bear as Threatened as an example of Federal encroachment on State authority to manage resources; urged greater State involvement in CITES matters.

Montana

—Agreed that, on balance, ESA is important and should be retained; advocated administration at State level.

Nevada

—Strongly supported retention of ESA; called for greater State involvement consistent with intent of ESA.

New Hampshire

—Supported streamlining so long as it would not adversely impact resources now protected by ESA.

* New Jersey

--Disputed listing of lynx, bobcat, and river otter on Appendix II of CITES.

* New Mexico

--Disputed appropriateness of certain areas proposed as Critical Habitat; urged inclusion of State agencies in Section 7 consultation; urged "full and equal partnership" for States under cooperative agreements; supported increased Federal funding of Section 6 agreements; urged better Federal-State coordination, including development of treaties; supported increased use of reintroductions; opposed listings of populations; provided amendment language to cover "experimental populations."

New Mexico

—Urged retention and full implementation of ESA.

New York

—Strongly urged retention of substance of ESA, with strong and uniform implementation.

* North Carolina

—Contended that CITES involves inappropriate Federal intrusion into areas of traditional State authority; advocated that "biological assessments" be dropped as part of Section 7 consultation.

North Dakota

—Supported retention of ESA with streamlined, uniform enforcement.

Ohio

—Supported retention of ESA; concurred with IAFWA recommendations for change; warned of dangers inherent in considering wildlife values in cost/benefit analysis.

South Carolina

—"Wholeheartedly" endorsed continuing implementation of ESA, including an agressive posture toward additions and deletions to Endangered and Threatened list; advocated strengthening of Section 6 cooperative agreements; urged some method be instituted to assure that Federal agencies request consultations when appropriate.

* South Dakota

—Advocated designation of Critical Habitat for the black-footed ferret, apparently so that greater use of rodenticides could be permitted outside the area so designated.

* Tennessee

—Urged greater State role in listing and delisting of species under CITES.

Tennessee

—Strongly affirmed the intent of ESA and supported forceful implementation; suggested several changes:

1. relate Critical Habitat designations more strongly to confirmed extant range of species;
2. make species lists provided during Section 7 consultation more site-specific; and
3. simplify biological assessments.

* Texas

—Complained of unwarranted intrusion of Federal authority on State sovereignty under CITES, criticized ESA implementation, in that species have allegedly been listed for political, rather than biological reasons.

Texas

—Suggested new definition of "resident" species to avoid Federal intervention in areas of State authority; recommended that approved Federal Aid projects not require ESA permitting.

* Utah

—Disputed listing of desert tortoise over State objections.

Virginia

—Opposed any change in ESA.

Virgin Islands

—Offered no recommendations.

* Washington

—Complained of lack of timeliness in provision of Federal contract funds under ESA.

Washington

—Made several suggestions:

1. advocated that Critical Habitat be part of recovery, rather than listing, process;
2. supported removal of economic assessments from listing to consultation;
3. supported restoration of funding for cooperative agreements under Section 6;
4. disputed appropriateness of new priority system;
5. supported continued consideration for candidate species in Section 7 consultation; and
6. advocated removal of prohibitions on certain "hopeless" species so that private interests might undertake manipulative management strategies without the need for permits.

Wisconsin

--Strongly recommended retention of ESA, holding that "balancing" sought by E.O. 12291 is already provided in 1978 amendments to Section 7; questioned biological soundness of new priority system, but acknowledged that it concentrates resources on best-known groups; supported increasing continuity of cooperative agreement funds under Section 6; urged increased coordination among international, Federal and State authorities under CITES.

* Wyoming

—Urged review of Endangered Species program before any more species are listed.

Wyoming

—Strongly urged retention of ESA, with uniform implementation; expressed concern that non-economic benefits be considered under Executive Order 12291.

* Comments provided prior to September 18, 1981, Federal Register notice.

COMMENTS FROM FEDERAL AGENCIES

Twelve Responses

Summary: Federal agencies most frequently addressed consultation prodedures under Section 7 (8 responses), suggesting various technical or substantial changes in proposed regulations. One agency (Army, with concurrence of Air Force) questioned the Department's authority to issue consultation regulations at all. Five agencies either had no recommendations or deferred recommendations for the present.

FEDERAL AGENCY COMMENTS

Air Force

--No recommendations; concurred with Army on Section 7 regulations.

* Army

—Questioned Interior's authority to promulgate regulations implementing Section 7 of ESA; questioned applicability of ESA in foreign countries; questioned legal basis for Fish and Wildlife Service requesting additional information during consultation.

* Bureau of Land Management

--Recommended clarification of Section 7 consultation regulations to impose time frames consistent with outer continental shelf leasing procedures; recommended that action agencies combine biological assessment and opinion procedures to avoid duplication.

* Bureau of Reclamation

--Recommended that exemption procedures be simplified and speeded; recommended that comments on proposals to list species only be required to be summarized if the comments represent significant new data, in order to expedite listing process; recommended that concurrence of State or foreign authorities be required before listing species

Council on Environmental Quality

—No recommendations-at this time.

Customs Service (Treasury)

—No recommendations.

Economic Development Administration (Commerce)

—No recommendations.

Federal Energy Regulatory Commission

--Generally supported Section 7 proposed rules; suggested clarifications and technical changes; offered no comment on other parts of ESA.

Forest Service

—Advocated greater assumption of responsibility by action agencies, by, e.g., developing their own biological opinions; advocated increased authority for introduction and reestablishment of listed species as part of recovery.

Geological Survey

—Recommended that "construction" and "biological assessment" only be applied to activities requiring an EIS under NEPA; recommended that a biological opinion be required to be provided within 90 days or non-jeopardy would be presumed; supported regulations requiring that listing not be undertaken unless sufficient information were available to conduct consultation, so that action agencies would not be required to provide additional information during consultation; recommended against issuance of interim regulations; recommended that regulations closely track ESA with regard to biological assessments; opposed analysis of cumulative effects; proposed other technical points to be included in consultation regulations.

National Park Service

—Offered no recommendations.

Office of Surface Mining

—Offered no recommendations.

Transportation

—Recommended:

1. integration of Section 7 consultation with NEPA process;
2. setting of firm deadlines in consultation process;
3. setting of standards for acceptable biological assessments; and
4. establishment of accelerated and limited consultation process for species identified after completion of NEPA process.

* Comments provided prior to September 18, 1981, Federal Register notice.

COMMENTS FROM ENVIRONMENTAL AND SCIENTIFIC ORGANIZATIONS

Thirteen Responses

Summary: Most of these groups (11 responses) supported retention and effective implementation of the Endangered Species Act. Two scientific groups urged a relaxation of permit procedures as they apply to museum specimens and three groups disputed the appropriateness of economic and other impact analysis as a prerequisite to species listings.

ENVIRONMENTAL/SCIENTIFIC COMMENTS

American Society of Ichthyologists and Herpetologists

--Expressed concern on several points;
favored:

1. exemption from permit provisions of salvaged specimens, legitimate museum specimens, and archaeological specimens;
2. streamlined and expedited permit procedures for scientific specimens;

opposed:

1. NEPA compliance, economic assessments, mandatory Critical Habitat, OMB review, Regulatory Flexibility Act compliance, Executive Order 12291 compliance for listing actions;
2. priority system based on "higher" versus "lower" life forms; and
3. funding cuts for the program.

Association of Southeastern Biologists

--Expressed general support for protective measures; suggested no changes.

Association of Systematics Collections

--Supported general relaxation of permitting procedures as they apply to scientific institutions.

Defenders of Wildlife

--Generally supported retention of ESA; urged prompt issuance of Section 7 regulations.

Elsa Wild Animal Appeal

--Expressed general support for the Act and program.

Environmental Defense Fund

--Urged that economic considerations not figure into the listing process, but rather be considered under exemption procedures only.

International Association of Fish and Wildlife Agencies

--Suggested changes in the Act to increase and emphasize the role of States in Endangered species conservation, and reduce or eliminate Federal intrusion in State wildlife management, particularly with regard to the bobcat and CITES; also opposed Critical Habitat designations for "experimental populations."

International Council for Bird Preservation

--Supported continued effectiveness of the Act and urged that Executive Order 12291 consider other than economic costs and benefits; suggested no changes.

International Primate Protection League

--Expressed general support for the Act and urged increased restriction on wildlife trade.

Meals for Millions/Freedom from Hunger Foundation

—Supported continued inclusion of plants under the Act.

Sharecroppers Fund (included a petition)

—Supported continued inclusion of plants under ESA.

Natual Resources Defense Council

--Expressed concern that 1978 changes in Section 7 had not yet been implemented by regulation and that USDA had not yet issued regulations to implement its obligations with regard to trade in plants; expressed general support for the Act and its purposes; suggested no changes.

The Wilderness Society

--Supported a strong statutory base for protecting Endangered species; suggested no changes.

Wildlife Legislative Fund

--Expressed concern on several points related to CITES inforcement and recommended clarification of definitions in ESA.

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COMMENTS FROM INDUSTRIAL AND DEVELOPMENT INTERESTS

Eleven Responses

Summary: The most frequent specific concern among this group was that species only be listed based on adequate documentation and that the Endangered Species Act not be used to further political goals (3 responses).

INDUSTRY/DEVELOPMENT COMMENTS

American Mining Congress

—Expressed a generalized need for change and provided a list of areas of concern without specific suggestions.

Basin Electric Power Cooperative

—Advocated Critical Habitat designations concurrent with listing; recommended that species "evolving toward extinction" not be protected; suggested several clarifications and technical changes in 50 CFR 424 listing regulations.

California Mining Association

—Provided no substantive suggestions, but urged that human values be given adequate consideration under the Act.

Colorado River Water Conservation District

—Urged that the Act not establish species conservation as a primary and overriding national goal; also disputed the scientific correctness of listings and urged establishment of an independent scientific panel; recommended that economics be a factor in listing.

Edison Electric Institute

—Suggested a series of questions to be addressed in evaluating ESA, including whether flexibility should be increased, what administrative changes might be made and to what extent ESA discourages measures to protect species.

Jackson Electric Membership Corporation

—Held that the Act and implementing rules were adequate and well handled; offered no specific suggestions.

National Forest Products Association

—Submitted a complete package of proposed amendments to ESA and its implementing regulations. For the most part, these were technical in nature and aimed at correcting apparent inconsistencies or clarifying areas of uncertainty; proposed a procedure that would provide for less stringent prohibition of agency actions under Section 7 of ESA and a system to report directly to Congress on the probable effects of agency actions; proposed a new Section 12 of ESA to provide that private interests be compensated for losses sustained as a result of prohibitions.

In a separate comment, NFPA expressed concern that the recent redefinition of "harm" does not adequately alleviate the problem of habitat modification constituting taking.

Northeast Utilities

--Recommended that "take" be limited to willful and knowing actions; recommended excepting from taking prohibition any action undertaken in accordance with the advice of the Secretary or pursuant to a permit examined under NEPA.

Potlatch

--Urged that changes be made to prevent anti-development interest from using the Act improperly and that the responsibilities of private landowners participating in federally-funded programs be clarified; also requested clarification of restrictions regarding Forest Service "sensitive" species.

Stoltze-Conner Lumber Company

--Urged consideration of human values under ESA.

Western States Water Council

--Urged that the purposes of the Act be clarified to indicate that species conservation is to be balanced against other national goals; suggested that listing take place promptly, with concurrent designation of Critical Habitat, and that the process be overseen by an outside scientific panel; disputed as unproven the idea that protection of natural ecosystems is necessary to the conservation of species; made several suggestions concerning the consultation process, aimed at an increased role for non-Federal entities and prompt rendering of biological opinions and conduct of exemption procedures.

INDIVIDUAL COMMENTS

Ronald Petersen, University of Tennessee

--Supported retention of plants under ESA; questioned the basis for emphasizing recovery over listing; urged enthusiastic support of ESA by administration.

Paul Ehrlich, Stanford University

--Strongly disagreed with priority system favoring vertebrates.

Testimony of
William H. Stevenson
Deputy Assistant Administrator for Fisheries
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
U.S. Department of Commerce
before the
Subcommittee on Environmental Pollution
Committee on Environment and Public Works
U.S. Senate
December 8, 1981

Mr. Chairman and Members of the Subcommittee:

I am William Stevenson, Deputy Assistant Administrator for Fisheries, National Oceanic and Atmospheric Administration. I appreciate this opportunity to provide the Subcommittee with a report of our activities conducted under the Endangered Species Act of 1973.

The Endangered Species Act represents the most comprehensive legislation for the preservation of endangered species that this country has ever enacted. Through the Act the United States has provided strong international leadership in the conservation of fish, wildlife, and plants faced with extinction. Preserving such species and their ecosystems is important for maintaining genetic diversity, which provides living organisms with the capability to acclimate and adapt to a changing physical environment. Effective implementation of the Endangered Species Act must continue if we are to preserve the world's genetic heritage for future generations.

The Department of Commerce is charged with carrying out this nation's commitment to managing and conserving our living marine resources. This responsibility has been delegated to the National Oceanic and Atmospheric Administration or NOAA. Living marine resources are managed and conserved under authority of many laws including: the Fish and Wildlife Coordination Act; the Magnuson Fishery Conservation and Management Act; the Fur Seal Act; the Marine Mammal Protection Act; and the Endangered Species Act. Research on marine species is conducted in NOAA's 24 fishery laboratories, which are among the world's finest. The information collected at these laboratories is used to implement programs to conserve and manage fishery resources, marine mammals and endangered species, and the habitat that is vital to these resources.

THE ENDANGERED SPECIES ACT:

Under the Endangered Species Act NMFS has jurisdiction for 18 marine species listed as endangered or threatened. These include: eight whales; two seals; six sea turtles; and two fishes. Jurisdiction over sea turtles is shared with the Department of the Interior's Fish and Wildlife Service. One of the seals, the Caribbean monk seal, probably is extinct.

Several key provisions of the Act establish our responsibilities and the processes we must follow to fulfill them. I would like to describe briefly our budget and specific research efforts, and then our domestic and international operational activities under these key provisions. Finally, I will discuss two issues we have identified in implementing the Act.

BUDGET:

During fiscal year 1981 we spent $2,559,000 under the authority of the Endangered Species Act. We plan to spend $2,347,000 in 1982. Activities in 1982 would include: program administration and support, $396,000; enforcement, $237,200; and sea turtle, pinneped, and cetacean research, $1,714,000.

ENDANGERED SPECIES RESEARCH:

Sea Turtles

The NMFS has developed a turtle excluder device or TED that can be attached to the most commonly used shrimp trawl to reduce the incidental catch of sea turtles by commercial fishermen. When used properly, the TED will reduce the incidental take of sea turtles by more than 95% without reducing the catch of shrimp. Preliminary tests also have shown the TED to be beneficial in reducing the undesirable by-catch of species such as jellyfish and horseshoe crabs and other large objects. They also indicate that TED may reduce fuel costs by reducing the drag on the net. In collaboration with the shrimp industry, environmental groups, and Sea Grant, we are in the process of transferring this technology to the industry. Recently, we demonstrated the TED to shrimpers along the southeast coast. Many shrimpers expressed an interest and several have begun to use TED. We anticipate that the TED will be adopted voluntarily by a majority of the shrimp fishermen, which will result in significant conservation of sea turtles.

Other sea turtle research includes studies to improve our estimates of populations of sea turtles in the southeast. These studies involve surveying beaches for nests, examining the size and seasonal distributions of stranded sea turtles, reanalyzing historical data, and analyzing data gathered from tagging programs. Information from these programs will be used to determine population status with which we can evaluate our recovery efforts.

We are conducting an experimental headstart program for the Kemp's or Atlantic Ridley sea turtle. To enhance the survival of juveniles, each year about 2000 hatchlings are removed from the wild and reared in a laboratory for 6-12 months. During the rearing period, data on behavior, feeding, and growth are gathered and examined. The turtles then are tagged and released at different locations in the Gulf of Mexico. This program, which started in 1978, is a joint effort involving Mexico, the State of Texas, the Department of the Interior, and NOAA. The limited information from recaptures indicates that some headstarted Ridley turtles can survive for at least three years.

NOAA also participates on an interagency task force convened by the U.S. Army Corps of Engineers to determine the occurrence and abundance of sea turtles in selected navigation channels in Florida. Data gathered during the program will be used to determine if dredging the channels will result in adverse impacts to sea turtles.

Hawaiian Monk Seal

We are concerned about the continued decline of the Hawaiian monk seal and have instituted a research program to determine the biology and ecology of this critically endangered species. Recent census data indicate that overall populations of monk seals decreased about 50 percent since the 1950's. Monk seal populations at Kure, Midway, and Pearl Islands and Hermes Reef declined 70 to 90 percent while only the populations at French Frigate Shoals and Necker Island increased during the same period.

Based upon our current understanding the most significant threats to the Hawaiian monk seal include disturbance and harassment by humans, commercial fishing, disease, shark predation, and man-made toxins. Ciguatoxin, a naturally occurring poison also is suspected as being a significant threat to the Hawaiian monk seal and is the suspected cause of death of about 50 Hawaiian monk seals on Laysan Island in 1978.

Our current research on the Hawaiian monk seal population includes:

(1) the Kure Atoll Pup Survival Study -- This study focuses on methods of enhancing pup survival at Kure Atoll, where recruitment of animals into the breeding population is near zero due to nearly 100% pup mortality;

(2) the Cooperative Aerial Survey with FWS -- Aerial survey techniques were developed for monk seal assessment taking. The project resulted in the only complete census of the North West Hawaiian Island population for FY 81;

(3) the Laysan Island Field Camp -- This study was initiated during the summer of 1981 to collect information concerning the reproductive biology of the Hawaiian monk seal; and

(4) the Flipper Tagging Study -- A pilot tagging study is being drafted, which focuses on causes of pup mortality and the age range yielding the highest mortality rates.

The results of these studies are being used to augment our Hawaiian monk seal recovery program.

Bowhead Whale

Bowhead whale research plans include completing the analyses of census data gathered over the past few years to determine the reliability of population estimates, completing the studies on life history parameters (i.e., rates of mortality, growth, recruitment and/or reproduction) and designing models that will aid in assessing the status of the bowhead whale stock with respect to the Native subsistence take.

INTERNATIONAL COOPERATION:

Our international cooperation has involved reviewing and analyzing information from foreign countries concerning species resident in those countries or harvested by residents of those countries on the high seas; encouraging research on and conservation of endangered and threatened species;

participating in the International Whaling Commission; and assisting the Department of the Interior in implementing the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES), by providing information about marine species listed in the Appendices of CITES to the Management Authority and by serving as a member of the International Convention Advisory Commission (ICAC). The inclusion of eight species of whales on the Endangered Species List provides a critical basis for United States policy in the International Whaling Commission.

We also are participating in and helping to finance a symposium on marine turtles to be held in Costa Rica in 1983 under the auspices of the Intergovernmental Oceanographic Commission Association for the Caribbean and Adjacent Regions (IOCARIBE) on the status of the stocks of the western Atlantic (Gulf and Caribbean) populations of sea turtles. From this symposium we expect to obtain the status and abundance of sea turtles throughout the western Atlantic.

SECTION 4:

Listing

Since the Act was amended in 1978 and 1979, the National Marine Fisheries Service, in conjunction with the Fish and Wildlife Service, Department of the Interior, promulgated regulations governing the listing of endangered and threatened wildlife and plants and the designation of critical habitat. In cooperation with the Fish and Wildlife Service we are reviewing these and other regulations implementing the Act for the Vice President's Regulatory Relief Task Force. We expect to conclude this review early in 1982.

Since 1978, the National Marine Fisheries Service has listed certain endangered and threatened sea turtles and the totoaba (an endangered marine fish found in the Gulf of California). The Service also has reviewed several candidate species for possible listing under the Act and designated critical habitat for the leatherback sea turtles in St. Croix, U.S. Virgin Islands.

Recovery Teams

Pursuant to section 4(g), the NMFS established Recovery Teams to prepare plans for recovering the listed sea turtles in the Atlantic Ocean, the Hawaiian monk seal, and the shortnose sturgeon. We anticipate these plans will be available in the near future.

Protective Regulations

To protect various listed marine species the NMFS has promulgated regulations including resuscitation procedures for incidentally taken threatened sea turtles, a temporary fishing restriction to protect sea turtles in the Port Canaveral, Florida Navigation Channel and harassment guidelines to protect humpback whales in waters surrounding the U.S. Hawaiian Islands.

Currently, the NMFS is examining additional methods to protect listed sea turtles including the use of the turtle excluder device. We are preparing a draft Supplemental Environmental Impact Statement on these various alternative measures which should be published in early 1982.

Review of Endangered Species List

The NMFS anticipates completing by FY 83 its first "5-year review" of the listed species under its jurisdiction to determine whether the status of such species should be changed.

SECTION 7:

Consultations

The consultation requirements of section 7 were modified by amendments made to the Act in 1978 and 1979. Section 7(a)(2) of the Act requires all Federal agencies, in consultation with and with the assistance of the Secretary of the Interior or Commerce, to insure that any action authorized, funded, or carried out by that agency is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat.

Since 1978, NMFS has received 1,076 requests for consultations pursuant to section 7. Most of these requests required only informal consultation, which does not involve the preparation of a biological opinion. There were 124 formal consultations of which 94 resulted in "no jeopardy" biological opinions, 12 concluded that there was not enough information to insure no jeopardy to the listed species involved; and 18 biological opinions found "jeopardy." Reasonable and prudent alternatives were offered for all "insufficient information" and "jeopardy" opinions. Except for one case, our reasonable and prudent alternatives were adopted and the projects were implemented as modified. Although the consultation process has resulted in modification of a number of projects, NMFS has not been involved in a consultation that prevented a proposed project from being implemented.

Our agency has worked hard to conduct meaningful consultations and to develop sound biological opinions that would help other Federal agencies to discharge their mandated responsibilities without violating the provisions of the Endangered Species Act. Indeed, the Circuit Court of Appeals for the District of Columbia recently upheld our Biological Opinion concerning oil and gas activities in the Beaufort Sea Outer Continental Shelf. This was one of the longest and most controversial consultations in which NMFS was involved.

We have worked with the Bureau of Land Management to streamline consultations on the Outer Continental Shelf Oil and Gas Leasing Program by conducting regional consultations. Regional consultations serve to provide an early warning of potential problems between listed species and oil and gas development on the outer continental shelf.

Staff members of NOAA have worked closely with the Department of the Interior (Fish and Wildlife Service) to develop joint regulations implementing in 1978 and 1979 amendments concerning the consultation process. These regulations are in draft form and have been reviewed by other Federal agencies. Promulgation of these regulations will further expedite the consultation process.

Exemption

The NMFS, in conjunction with the Fish and Wildlife Service, promulgated regulations governing the application procedures and criteria for obtaining an exemption from the provisions of sections 7 and 9 of the Act from the Endangered Species Committee. We have little experience with the exemption process and cannot adequately assess whether the regulations or the process have worked well. We believe that the Act's elaborate exemption process has encouraged Federal agencies to consult in good faith to resolve conflicts rather than seek an exemption.

SECTION 10:

Permits

Permit issuance provides another means of fulfilling our broader marine conservation responsibilities under the Endangered Species Act and other major laws and international conventions. Permits involving endangered species provide an element of essential control over activities which could result in impacts on these species. As such, they are an integral part of our efforts to conserve listed species. Permits also require active followup and monitoring since on the average, each permit is modified at least once. About three-quarters of the permits issued are still in effect.

About eighty percent (80%) of our endangered species permits involve marine mammals, and the requirements of both the Endangered Species Act and the Marine Mammal Protection Act must be satisfied. In addition, we have joint responsibility with the Fish and Wildlife Service for issuing permits for sea turtles.

SECTION 11(e):

Enforcement

Endangered species enforcement activities include investigation, and control of illegal taking, including and harassing protected species, as well as control over importing and exporting activities. Illegal shipments of parts and products of endangered and threatened species resulting in seizures, forfeitures, and fines have been the primary enforcement focus over the years. Increasing the public awareness of Federal controls on imports has also been emphasized in order to reduce the volume of seizures involving tourists unfamiliar with the Act's strict prohibitions on imports.

Because very few resources are available for endangered species enforcement activities, we have had to make some crucial adjustments in order to achieve maximum utilization of those resources. In the past, our enforcement efforts were largely in response to specific complaints from the public. With NMFS instituted training programs and experience, our enforcement agents have become more sophisticated in their approach to controlling those illegal activities prohibited by the Act. In one case our agents cracked a multi-million dollar sea turtle meat smuggling ring in southwest Texas. So far that case has resulted in a series of Grand Jury indictments and several guilty pleas. Operations involving large scale trading and smuggling entail the cooperation of other Federal agencies, state and local authorities, as well as authorities of foreign governments. Such interagency and intergovernmental cooperation provides for both efficient use of enforcement resources and better protection of threatened and endangered species.

ISSUES:

Section 7/9

Under this Department's interpretation of the existing provisions of the ESA, Federal agencies receiving "no jeopardy" biological opinions from either NMFS or the Fish and Wildlife Service under section 7, may remain subject to the taking prohibitions of section 9. Consequently, a Federal agency or an individual receiving Federal authorization could face civil or criminal liability for any takings of listed species incidental to the Federal or Federally authorized action, even though a "no jeopardy" Biological Opinion on the Agency action was issued. Although the National Marine Fisheries Service rarely has been involved in section 7/9 conflict situations, the problem may occur in Federally authorized activities such as outer continental shelf oil and gas development and navigation channel dredging. The NMFS is examining this issue to determine the most appropriate resolution to the problem.

Section 7 Regulations

Section 7 of the Act was amended in 1978 and 1979 but regulations implementing those amendments have not been promulgated. We worked with the Fish and Wildlife Service to develop draft regulations, which were reviewed by other Federal agencies and modified several times to streamline the consultation process and to eliminate overly burdensome requirements. Although both NMFS and the Fish and Wildlife Service have used the draft regulations for guidance, the lack of enforceable regulations has caused confusion and misunderstandings about the role and responsibilities of Federal agencies under section 7 of the Act. Federal agencies must understand and participate fully in the consultation process for the process to be effective. The NMFS believes that any new regulations that are promulgated must provide other Federal agencies with the appropriate guidance for meeting their responsibilities under section 7 of the Act, and must provide sufficient guidance to enable Federal agencies to consult with the Services so as to avoid most conflicts between the conservation of endangered and threatened species and the proposed actions of Federal agencies.

To summarize, I believe that the Endangered Species Act has worked well with respect to marine species. Although some issues remain, generally we expect to resolve them administratively. The need for further regulatory and statutory changes now is under review within the Administration. We will inform the Congress of the results of the review upon its completion.

Mr. Chairman, this concludes my formal statement. I thank the Subcommittee for the opportunity to appear here today and will be pleased to answer any questions that you may have.

STATEMENT

Carol E. Dinkins
Assistant Attorney General
Land and Natural Resources Division
U. S. Department of Justice

Mr. Chairman and members of the Subcommittee. My name is Carol E. Dinkins. I am the Assistant Attorney General for the Land and Natural Resources Division of the Department of Justice. I would like to thank you for asking me to participate on behalf of the Department of Justice in these oversight hearings on the Endangered Species Act.

The Land and Natural Resources Division has responsibility for the conduct of all litigation under the Endangered Species Act, including criminal prosecutions, forfeiture actions, and defense of civil actions filed against government agencies. The Wildlife and Marine Resources Section of the Division devotes a major percentage of its efforts to these varied Endangered Species Act cases. In the two years since formation of the Section we have prosecuted or assisted in the investigation or prosecution of approximately 70 Endangered Species Act cases, supervised over 140 forfeiture actions under the Act, and have defended 13 major civil cases. In addition, we have provided assistance to our principal client agencies, the Fish and Wildlife Service of the Department of the Interior and the National Marine Fisheries Service within the Department of Commerce, on a number of matters that did not ultimately result in litigation.

Effective wildlife law enforcement is a major concern of the Division. It was that concern that led to our support of strengthened enforcement measures in the recently enacted Lacey Act Amendments of 1981. We have similar concern that the Endangered Species Act provide effective law enforcement tools.

As a general matter, we have found the Act satisfactory. We have identified a few issues concerning the enforcement provisions of the Act that merit mention. We are currently reviewing these issues to develop options for their resolution. When this review is completed and our recommendations are finalized, we will certainly communicate them to Congress.

Criminal Penalties

First, the penalties provision for violation of the criminal prohibitions of the Act is the source of problems in enforcing the Act against large scale smuggling and trafficking in endangered species. Section 11 presently provides for a maximum penalty of one year's imprisonment and $20,000 fine for violation of the Act or of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which the Act implements. Section 4(d)(1) of the Lacey Act Amendments of 1981 in contrast, imposes a felony sanction and a maximum sentence of 5 years for import and export offenses as well as offenses involving the sale of wildlife valued at $350 or more. The Lacey Act felony sanction has proved to be a valuable deterrent to illegal wildlife trade.

Under current law, then, an Endangered Species Act violation may be punished as a felony or misdemeanor depending upon whether the prosecutor elects to proceed under Lacey Act provisions incorporating other federal wildlife laws or under the Endangered Species Act itself. Both the penalties for similar offenses and the deterrent effect to major commercial violators are inconsistent under the two Acts. The Department is studying the interrelationship of the penalty provisions of these laws and may recommend specific amendments to them at a later date.

Injunctive Authority

An apparent oversight in the Act presents a second issue. Section 11 accords private citizens the right to seek injunctive relief but provides no federal enforcement authority to the Attorney General. Other environmental statutes with comparable citizen suit provisions, such as the Clean Air and Clean Water Acts, give the federal government the right to seek injunctive relief.

The injunction would provide greater opportunity to attempt resolution of the conflict between the project and the species before the harm to the species occurred. Because courts are reluctant to infer a right of action on behalf of the government absent a specific congressional grant of authority, we have chosen not to pursue this form of relief. The Committee may wish to investigate enforcement interests, as well as the interests of the potential violator and the potentially harmed species, to determine how they could be served by our ability to enjoin an imminent violation of the Act rather than the ability only to prosecute a completed violation.

Citizens Suits

The citizen suit provision authorizing "private attorney general" actions also warrants mention. Section 11(g) allows private parties to sue to enjoin any violation of the Act. The scope of relief offered the private citizen is thus very broad. It permits suits not only to enjoin the prohibitions of Section 9 and the consultation requirements of Section 7, but also to set aside regulatory actions taken under the Act. In contrast, citizen suit provisions in other environmental statutes generally have limited private enforcement rights to enjoin violations of specific statutory prohibitions. The limited citizen suit provisions of the Clean Air Act, 42 U.S.C. 7604, and the Clean Water Act, 33 U.S.C. 1365, are typical. Citizen suit provisions generally serve to supplement government enforcement efforts, not to create a new right of action to challenge agency rules. Indeed, the Act's prohibition of citizen suits where the Secretary or the Attorney General has already undertaken enforcement actions, set out in Section 11(g)(2), suggests that Congress viewed citizen suits as a counterpart to government enforcement. Narrowly drafted private attorney general provisions in comparable statutes do not restrict the ability of private citizens either to challenge agency rules or decisions or to seek injunctive relief through other avenues. Such challenges to agency action may still be brought under the Administrative Procedure Act. We are currently reviewing the citizen suit provisions under the Endangered Species Act in reference to these other laws and may recommend specific amendments to them at a later date.

The broad authority of the courts to award attorneys fees to private plaintiffs under the citizen suit provision generates some conflict. Fees under the Act are potentially available to any party, whether or not that party has prevailed in the litigation. For suits challenging administrative action, this represents a significant change from ordinary APA practice which awards fees only to prevailing parties. The broad availability of attorneys fees for challenges to regulatory activities as the Act currently authorizes is a source of potential litigation problems.

The statute is silent regarding the standard of review to be applied in citizen suits; this omission is a recurrent question in cases litigated under the Act. Courts to date have routinely applied the APA's "arbitrary and capricious" standard to citizen suits involving regulatory challenges. Some argue that because the provision itself establishes no standard, a *de novo* standard applies to all citizens suits. The appropriate standard of review, however, should vary with the nature of the suit, the lack of any clear standard of review gives poor guidance to parties and the courts in Endangered Species Act suits.

Other Enforcement Issues

We have encountered additional important enforcement issues in our work on the Act. One question of current concern involves the construction of Section 6(f) of the Act, which addresses preemption of state regulation of threatened or endangered species. The degree to which a state may regulate endangered species more stringently than the federal government is important to criminal enforcement under the Lacey Act, which prohibits interstate commerce in wildlife taken, transported, or sold "in violation of any law or regulation of any State." Section 3(a)(2), Lacey Act Amendments of 1981.

The Department of the Interior has previously interpreted Section 6(f) of the Endangered Species Act only to allow state regulation of resident or indigenous species. In a recent ruling, however, the United States District Court for the Eastern District of California upheld against a constitutional challenge based upon federal preemption the validity of a California statute which regulates non-indigenous species. H. J. Justin & Sons, Inc., etc. v. Brown, et al., No. CIV S-80-941 RAR (E.D. Cal. Aug. 21, 1981). The California statute prohibited, among other things, the sale within California of products made from the bodies or parts of elephants, pythons, and kangaroos. The extent of permissible state regulation of federally-listed species should be clarified in the future.

A further ambiguity in the Act has created enforcement problems. The "grandfather clause" of the Act, Section 9(b)(1), exempts wildlife held for proper purposes on December 28, 1973. We have consistently taken the position in litigation that the clause exempts wildlife held for noncommercial purposes on that date. Thus, we have argued that the Act does not authorize commercial dealings in endangered species even if they were held noncommercially on December 28, 1973. The courts have taken conflicting views of the clause. The Sixth Circuit, in United States v. Kepler, 531 F.2d 796 (6th Cir. 1976), agreed with our interpretation. The Third Circuit, however, in

United States v. Molt, No. 79-2409 (3rd Cir. 1980), found the Section susceptible of various interpretations. As a result, the court concluded that the Act's failure to provide adequate notice of the conduct prohibited required reversal of a conviction for illegal imports of endangered reptiles. In view of this division in the Courts of Appeals, we suggest clarification of the exemption created in Section 9(b)(1).

The final enforcement issue that has concerned us involves the knowledge requirements applicable in prosecutions for illegal possession of endangered or Convention species. Section 9(c)(1), which prohibits trade in wildlife contrary to the provisions of CITES, specifically makes it unlawful for any person "to possess any specimens traded contrary to the provisions of the Convention . . . ." There has been some debate whether that language requires proof only of possession of an illegally traded species or whether it requires, in addition, proof of knowledge on the part of the possessor that the species was traded in violation of CITES. Similarly, Section 9(a)(1)(D) prohibits the possession of illegally taken endangered species. It is not clear under this Section whether we must prove knowledge on the part of the possessor of the illegal taking to obtain a conviction.

Civil Litigation Issues

In addition to our enforcement interests, we also have concern for smooth and effective defense of our client agencies in civil Endangered Species Act litigation.

One significant issue under the Act arose in our defense of Defenders of Wildlife, Inc. v. Endangered Species Scientific Authority, et al., No. 79-2512 (D.C. Cir.), cert. denied, No. 80-1997 (Nov. 2, 1981). The Court of Appeals in that case held that before allowing export of bobcats under CITES the federal government must have both a reliable estimate of state bobcat populations and information concerning the number to be killed in a particular season. This holding imposed a considerably more rigorous export standard on the Department of the Interior, and indirectly on the states, than that previously implemented by the agency which emphasized population trend information rather than specific numbers. Section 8(a) of the Act, which implements CITES, and its predecessor, Section 8(e) (repealed in 1979), have established no specific export standard, nor for that matter does the Convention itself. The Court of Appeals interpretation of the appropriate standard in light of Section 8 may be contested.

As always, we appreciate having the opportunity to appear before the Subcommittee to present this testimony and welcome any questions that you might have.

MEYERS, MARSHALL & MEYERS
TWELFTH FLOOR
1050 SEVENTEENTH STREET, N. W.
WASHINGTON, D. C. 20036

NORMAN L. MEYERS
J. HOWARD MARSHALL
N. MARSHALL MEYERS

ARTHUR D. SCHAFFER
OF COUNSEL

TELEPHONE
(202) 466-8270

CABLE ADDRESS:
"NORMEY"

STATEMENT OF
MARSHALL MEYERS
PET INDUSTRY JOINT ADVISORY COUNCIL
BEFORE
SUBCOMMITTEE ON ENVIRONMENTAL POLLUTION
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

December 8, 1981

Mr. Chairman and Members of the Subcommittee;

My name is Marshall Meyers and I am appearing today as General Counsel of the Pet Industry Joint Advisory Council (PIJAC). I want to thank you for the opportunity to testify on the implementation of the Endangered Species Act.

The pet industry is not only concerned with, but also dependent upon proper and rational wildlife resource management to protect wildlife and ensure them as a renewable resource. Industry fully recognizes that a number of species are clearly endangered or threatened and therefore warrant the types of protection afforded by the Act. We oppose habitat destruction, especially when adequate measures are not employed for translocation of wildlife or the placement of such wildlife in captive breeding programs. For many species, placement in trade is not per se detrimental; legitimate trade often relieves the pressures for illicit trade, and permits captive breeding, and often prevents their destruction.

We do not endorse the taking, possession, capturing of species for use as common pets if they are proven to be endangered. Those species may be properly placed in captive breeding programs when habitat destruction is inevitable or dislocated wildlife can not be translocated.

While the pet industry agrees that certain species are not suitable as household pets, the propagation of many species is often furthered by individuals who are aviculturists, herpetologists, icthyologists or primatologists, conducting successful and beneficial captive breeding programs. Such programs, including access to specimens, should be encouraged; regulatory roadblocks should not curtail such legitimate efforts of institutions or individuals.

The Endangered Species program is fraught with complex, emotional and environmental issues which require the balancing of interests. The Endangered Species Act, as well as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), are essential to ensure protection of endangered and threatened species; provided, however, that implementation and enforcement is carried out in accordance with the intent of Congress. On balance, the Endangered Species Act appears to be effective even though there are several areas which we feel require improvement.

As a preliminary comment, I want to emphasize that the pet industry endorses reauthorization of the Act for a two or three year period. Reauthorization or sunset provisions provide the Congress a unique opportunity to compel both periodic Congressional and administrative review as well as place unique pressures upon the administration to efficiently and effectively carry out the Congressional mandate during the interim period. While it may be unfortunate for the Congress to repeatedly expend time in oversite and reauthorization proceedings, such constraints appear to be a most effective solution.

Most of our industry's concerns have been and can be resolved through administrative action; they do not require substantial amendments to the Act at this time. The captive breeding regulations and the requisite permit procedures, for example, have been streamlined and are working. Interior's Wildlife Permit Office continues to experiment with innovative procedures to make the program more efficient.

A serious problem which has not been resolved administratively involves myriad wildlife lists one is compelled to review to ascertain compliance. Interior has yet to publish a consolidated list indicating by species the particular laws and/or regulations applicable. Multiple listings are a real, not hypothetical, problem.

To ensure compliance, one should review lists for injurious wildlife, Endangered Species Act species, CITES species, migratory birds, etc. The lists as well as various regulations overlap and often lead to confusion. Even Interior's staff encounters difficulties. Private citizens contact law enforcement agents to determine which permits are required for non-native species; the agent advises that CITES Appendix II (Threatened) permits are all that are required; the shipment enters the United States; the agent subsequently discovers the species happen to also be on the Endangered Species Act list; the shipment is seized and a $4,000 bond posted; and the importer assessed a $1,000 fine and the bond forfeited. Attorneys become involved, expenses soar -- all over an inadvertent mistake which would have been avoided if a consolidated list existed.

Interior should consolidate the wildlife lists and code them to indicate the applicable laws and regulations.

For three years, the pet industry has asked the Department to consolidate the lists but all to no avail. Possibly, this Committee could encourage the Department to complete such consolidations.

Dual listings under the Act and CITES also cause confusion, especially as to non-native species. CITES is an International Trade Convention to protect, *inter alia*, those members of the animal kingdom proven to be endangered (Appendix I) or threatened (Appendix II). A mechanism permitting trade in Appendix II species has been incorporated. It makes little sense, therefore, to list CITES Appendix II non-native species under the Act when the CITES Parties,often countries of origin,have affirmatively determined that trade is permissible. We believe the Department should explore other methods for handling non-native species listed under Appendix II.

An area which requires statutory amendment involves the listing/delisting process. Listing/delisting via rulemaking procedures under Section 553 of the Administrative Procedures Act does not provide the most effective mechanism. Letter writing contests, *ex parte* communications, political pressures, and reliance upon data, not subjected to the burden of proof and cross examination of a formal hearing, produce questionable results. It is well recognized that unjustified species listings have occurred under the Endangered Species Act and CITES. The Section 553, public "meetings" or "hearings," presently available under the Act, is simply not adequate; especially when there is a presumption favoring listing and an underlying belief that consumptive use of animals for a profit is immoral and wrong.

To develop the best scientific and commercial data available, a formal hearing process in conformance with the standards of Section 554 of the Administrative Procedures Act (5 U.S.C. §554) should be incorporated in the statute in lieu of the existing Section 553 informal, rulemaking type hearing. This would provide not only the Department, but also interested persons, an opportunity to develop, on an evidentiary record, the best available data subject to cross examination, and to obtain an opinion by an Administrative Law Judge -- an opinion which would contain the Judge's findings and conclusions and the reasons and basis therefor. Adjudication of complex environmental issues could first be determined at the administrative level, rather than turning to the Courts which are loath to overturn administrative determinations, absent a clear showing that the administrative determination was arbitrary, capricious, an abuse of discretion or otherwise not in accordance with the law.

Providing for formal hearings would result in more realistic decision making. It should alleviate the concerns of States, Foreign countries, or other interested persons with respect to improper listings or delistings. The hearings would not be mandatory for all listings/delistings, but would be invoked by a petition of an interested party or by the Department's own initiative. To avoid lengthy delays in listing species, a listing could be made pending the outcome of the hearing. Ample safeguards could be incorporated to satisfy the concern of both the environmentalists and trade. We urge the Committee to consider such an amendment.

As to CITES implementation, we can not fault Interior's CITES Appendix II permit process. The Department is making great strides in making that process more efficient. The CITES listing/delisting procedures, however, are a different story. As under the Act, a number of species have been listed which are clearly neither endangered, nor threatened.

The only practical recourse available to the United States to protest unwarranted listings is entering a reservation pursuant to Article XXII of CITES. We recognize the inherent difficulties and foreign policy issues related to invoking this form of opposition, particularly with multilateral treaties. In certain circumstances, however, a reservation is appropriate and does not signal deterioration of the United States' commitment to CITES. In fact, it would strengthen this commitment to strictly adhere to criteria adopted by the Parties.1/

To illustrate this point, I will briefly review the recent listing of an entire order during the Third Meeting of the CITES Parties in New Delhi, India. The proposal to list all Psittaciformes (parrots) on Appendix II, except those listed on Appendix I and three "common"

1/ Procedures for determining which species should be listed on CITES appendices were established at the First Regular Meeting of the Conference of the Parties in Berne, Switzerland, in November 1976. The "Berne Criteria" specifically requires that certain biological and trade data be provided. CITES Documents Conf. 1.1, Conf. 1.2 and Conf. 1.3.

species (budgies, cockatiels and Rosey-ringed parakeet), was replete with generalizations, little to no trade data, and conclusory statements. Specific data were virtually non-existent. In fact, the listing proponent -- the United Kingdom -- admitted that 134 species are common in the wild and indicated that trade in many species is extremely limited, not known or non-existent and that only 41 of the 300 species of psittacines are "rare", "endangered", "scarce", "vulnerable", "possibly extinct", or "very rare". As to the remainder, their status was "indeterminant", "unknown", or "declining". Yet, reliance upon unsubstantiated statements and questionable data prevailed and, therefore, an entire order was listed.

During the Meeting, the United States and Switzerland strongly opposed the concept of wholesale listings absent strict adherence to the Berne Criteria. Interior subsequently sought public comment regarding the United States' entering a reservation. (46 Federal Register 20713, April 7, 1981) We have attached a copy of the pet industry's comments in support of such a reservation.

In lieu of entering a reservation, Interior stated that it would communicate to the foreign governments "its serious concern about the listing of psittacine birds". 46 Federal Register 44660, September 4, 1981.[1] Such a communication, however, will do little in demonstrating to the other CITES Parties that the United States is truly concerned about whether the criteria established for listing or delisting shall be followed. It hardly assuages the concerns of those who are adversely affected by unsubstantiated and unjustified listings.

We do not have an easy solution. Entering reservations alone will not solve the problem. Interior should be compelled to implement an effective program for transmitting the United States' concern about the CITES' listing/delisting process. If the CITES Parties continue to ignore established criteria and depart from the intent of the Convention, continued participation and support by the United States should be given serious consideration.

The final area of concern involves the future of the International Convention Advisory Commission created by the Endangered Species Act to function as a scientific advisory body to the Secretary of Interior on CITES' matters. ICAC is an example of an organization which has

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1/ Switzerland has entered a reservation.

exhibited a tremendous ability to generate paper, publish inaccurate data, and consistently recommended cumbersome recordkeeping requirements, survey forms, and other documents to justify and perpetuate its existence. ICAC duplicated many of the efforts of the Wildlife Permit Office and the Office of Scientific Authority; it appeared that ICAC desired to become the United States' CITES Management and Scientific Authority. Apart from the fact that ICAC has been dissolved by administrative fiat, the pet industry recommends that it be legislatively abolished.

In closing, Mr. Chairman, I want to emphasize PIJAC's position that on balance the Endangered Species Act and its implementation is effective. We do not support substantial revisions to the Act which would weaken the original intent of Congress. As stated previously, a number of the problems raised this morning can be cured administratively. We look forward to working closely with the Committee and participating in future hearings.

Thank you very much for providing me this opportunity to testify today.

MEYERS, MARSHALL & YOUNG
TWELFTH FLOOR
1050 SEVENTEENTH STREET, N. W.
WASHINGTON, D. C. 20036

NORMAN L. MEYERS
N. MARSHALL MEYERS
JUANNE W. YOUNG
J. HOWARD MARSHALL

ARTHUR D. SCHAFFER
OF COUNSEL

TELEPHONE
(202) 466-8270

CABLE ADDRESS:
"NORMEY"

TWX: 710 822 9267

May 6, 1981

Office of the Scientific Authority
U.S. Fish and Wildlife Service
Washington, D.C. 20240

Re: Notice on CITES'
Amendments to Appendices
46 F.R. 20713, April 7, 1981

Gentlemen:

The Pet Industry Joint Advisory Council (hereinafter referred to as "PIJAC"), pursuant to the Notice of the Department of Interior regarding amendments to the appendices to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (T.I.A.S. No. 3249)(hereinafter referred to as "CITES")(46 F.R. 20713, April 7, 1981), submits herein its comments in support of the entering by the United States of a Reservation with respect to the listing of all Psittaciformes on Appendix II, except those listed on Appendix I and Melopsittacus undulatus (Budgerigar), Nymphicus hollandicus (Cockatiels) and Psittacula krameri (Rosey-ringed parakeet). Such Reservation may be entered by a CITES Party pursuant to Articles XV, XVI and XXIII. In support thereof, PIJAC submits as follows:

1. PIJAC is a trade association whose membership consists of twenty-three (23) industry trade associations and approximately one thousand (1,000) individual and company members engaged in every aspect of the pet industry. Its members consist of persons engaged in importation, breeding, distribution and sale of wildlife and domestic animals for pets, zoological purposes, and biomedical research. Its membership also consists of manufacturers and distributors of related pet products. PIJAC represents the majority of persons active in the pet trade which includes avian species.

2. PIJAC endorses rational conservation and management measures that provide for habitat maintenance, proper harvesting, translocation of dislocated species, and captive breeding. PIJAC

recognizes the necessity of CITES and has participated as a non-governmental observer at the last two Conferences of the Parties. PIJAC encourages and endorses listing any species which, pursuant to established criteria, are proven to be endangered (Appendix I) as well as those species which, pursuant to established criteria are proven to be threatened or must be listed in order to control trade in threatened or potentially threatened species (Appendix II). PIJAC has long advocated the establishment of scientifically valid and justified criteria, be they for domestic legislation or international treaties.

3. CITES, as a multinational Treaty, was designed to provide for "the protection of certain species of wild fauna and flora against over-exploitation through international trade." (CITES Preamble) Pursuant to the provisions of the Treaty, three appendices were established to differentiate the degree of protection afforded those species for which the listing proponents had submitted evidence in conformance and compliance with the listing criteria.

4. Procedures for determining which species should be listed on Appendices I, II or III were established at the First Regular Meeting of the Conference of the Parties in Berne, Switzerland, in November 1976. The "Berne Criteria" specifically require, inter alia, that certain biological and trade data be produced before listing a species on Appendix II. The data should indicate, for example, that the species in question are subject to a decreasing or very limited population size or geographic range of distribution. Biological status shall be demonstrated by "scientific reports" on population size or range over a number of years, single surveys, reliable (qualified) observers' reports over a number of years, and/or habitat destruction or trade impact. "Genera should be listed" only if some of their species are "threatened and identification of individual species within the genus is difficult." Similar standards apply to the inclusion of smaller taxa within larger taxa. Conf. 1.1.[1] Species meeting the biological criteria may be listed if they are presently subject to trade or are likely to be traded. The Berne Criteria specifically require that "there should be evidence of actual or expected trade in such a volume as to constitute a potential threat to survival of the species." Conf.1.1., Conf.1.2. and Conf.1.3.

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1. The biological status information is listed in order of preference. Conf.1.1.

5. At the recently concluded Third Regular Meeting of the Conference of the Parties in New Delhi, India, the Parties adopted a proposal of the United Kingdom to list on Appendix II as threatened species all psittacines except those species listed on Appendix I as well as the Budgerigar, Cockatiel and Rosey-ringed parakeet. Doc.3.31. The United Kingdom's proposal hardly meets the CITES' criteria by any stretch of the imagination. The proposal was replete with generalizations, little to no trade data, and conclusory statements such as "trade is largely unregulated and unmonitored," "legislation of individual states difficult to enforce," "the popular demand for the birds, the large profits involved and the difficulties of identification of the birds for monitoring for regulatory purposes," "the size of the trade and the species involved are inadequately known," "protective legislation regarding parrots is developing slowly," "a number of parrot species have an entirely unknown status," "status indeterminate," "critical matters such as distribution, density and population dynamics are either unknown or under-studied," "taxonomy uncertain," etc. Finally, all psittacines should be listed because identification is difficult and most "look-alike". Having made such imprecise conclusions, the United Kingdom went on to conclude that "trade in parrots is enormous" and with "the pressure of trade and the tradeability of so many species, it is probable that increasing numbers of species of parrot will be proposed for inclusion in the appendices in the near future," ergo, let's save time and list the entire order now, despite the fact trade was and is likely to be non-existent for many species as well as a number of species for which the status is "entirely unknown."

6. The proposal of the United Kingdom is virtually void of data by species as to trade, population, range, habitat utilization, etc. In fact, the eighteen (18) references cited by the United Kingdom, upon close analysis, fail to buttress the conclusion that the entire order, let alone most of its species, meet the biological and trade criteria. It is incredible that the scientific integrity of CITES with respect to the listing of an entire order falls upon eighteen (18) references, most of which contain incomplete and limited trade data, rests on result-oriented reports, and only one of which is published in a recognized zoological or scientific journal. None of the references support a wholesale listing.

7. The United Kingdom contends that of the approximate 300 species of psittacines, one hundred and thirty-four (134) species are "common" in the wild and indicated that trade in

many species is extremely limited, not known or nonexistent; forty-one (41) species are "rare," "endangered," "scarce," "vulnerable," "possibly extinct," or "very rare." The remainder are "indeterminate," "uncommon," or "declining." According to the United Kingdom's proposal, those species classified as "common" are species which appear "to be able to withstand trade" and the listing is made for the purpose of enabling "effective controls" over more vulnerable species. "Monitoring of trade in these commoner species is a secondary but valuable additional reason." No evidence was submitted to justify that such species were in fact look-alikes under Article II 2(b). Nor is monitoring of trade alone valid reason for listing under CITES.

8. Proponents of the listing rely upon unsubstantiated statements that "all psittacines" are "heavily traded" and that trade is the real cause of the decline of certain species. As an example of one who parrots the United Kingdom's justification, S. Dillon Ripley, on behalf of the International Council for Bird Preservation, concludes inaccurately that "international trade in parrots may involve a million birds annually." His presumption infers that these birds are predominately wild caught, when, in fact, only a small number involve species which warrant consideration for listing under the Berne Criteria as species whose biological status and/or the impact of trade might render them "threatened."

9. The listing of psittacines on Appendix II results in a far more complex and cumbersome permit process than presently exists in many exporting countries which require export permits. Compliance with CITES' standards will require exporting countries to refuse export permits until its Scientific Authority affirmatively finds that the exports will not be detrimental to the survival of the species. The appropriate authorities must also monitor export permits as well as the actual shipments. Many producer countries are ill-equipped and are not prepared to make such non-detriment findings and process the permits required for trade in "common," non-endangered and/or non-threatened species. They simply do not have the scientific and management expertise to make species specific findings,[2] they lack manpower and/or the finances to meet CITES' standards, especially for many species which are clearly abundant, and some of which are nuisances and pests and wantonly destroyed.

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[2] Even the United States' Scientific Authority with its expertise, sophistication and funding has yet to master the non-detriment finding process. See Decision, Court of Appeals, Defenders of Wildlife v. Endangered Species Scientific Authority, et al., No. 79-2512, February 3, 1981.

10. The assertions of several environmental groups that the psittacine listing will assist monitoring and identification are fallacious. By adding the entire order to the appendices, substantial increased paperwork and law enforcement burdens will ensue and the costs associated therewith will escalate dramatically due to increased permit processing, monitoring and inspection. Species identification problems also will escalate, shipments will be delayed, and needless mortality encountered. The mere fact of a CITES' permit accompanying the shipment will not reduce the inspection process. In fact, the inspection burdens will be increased substantially to ensure that strict compliance is afforded. Inspection personnel, be they in developed or lesser developed countries, will encounter more difficulties in administering what is essentially a reverse listing rather than administering a limited list of prohibited, restricted or regulated species. That, coupled with increased administrative costs which will most likely be borne by legitimate trade, will render trade in many species uneconomic. Graft and corruption will ensue in certain areas and illicit trade will flourish -- clearly aims not contemplated by CITES.

11. The United States and Switzerland strongly opposed the concept of a wholesale listing of more than three hundred (300) species of parrots because the listing criteria were not followed. During the course of the New Delhi Conference, the United States delegation strongly opposed wholesale listings by taxa absent strict adherence to the Berne Criteria. The United States advocated the listing of 21 species on Appendix II for biological reasons and 13 species for "look-alike" purposes. The United States stressed strict application of the Berne Criteria for other listings on the appendices and withdrew 11 of its proposals because they did not meet the criteria. Additionally, the United States, along with Canada, introduced a proposed resolution which would have imposed strict standards for the listing of "look-alikes" under Article II 2(b). It was the United States' position that such standards need to be developed to ensure that myriad species were not lumped on to the list for "very fuzzy reasons," such as a need to monitor trade, and that no other biological or scientific data existed to justify listing. The United States also sought the adoption of a resolution which would establish different standards for issuing permits for "look-alikes." This would eliminate the necessity for Scientific Authorities making unnecessary non-detriment findings for species listed as "look-alikes".

12. During a briefing of the House Subcommittee on Fisheries and Wildlife, Ronald Lambertson, Associate Director - Federal Assistance, Fish and Wildlife Service, testified "we must continue to assert our positions that the list should be credible...I also suggest that this country clearly define our policy toward mass listings and define those situations under which we should consider taking a reservation from those listings which do not meet the listing criteria." (Statement, March 19, 1981)

13. The listing of an entire order -- absent adequate data and the refusal to follow established criteria -- seriously affects the credibility and integrity of CITES. It is obvious that all psittacines are not threatened species; that the listing in this instance is political and not determined by scientific justifications which must utilize biological data and trade data required by the Berne Criteria as a condition precedent to listing.

14. Article XXIII specifically enables States to enter specific reservations with respect to species included in Appendices I, II or III; similarly, Article XV, paragraph 3, and Article XVI, paragraph 2, provide for specific reservations to amendments of the appendices. As of January 1, 1980, ten (10) states have entered fifty-seven (57) reservations. CITES, Annual Report of the Secretariat, 1979. The States entering such reservations, like the United States, are major advocates of conservation and staunch supporters of CITES; Australia, Botswana, Canada, Denmark, France, Germany, Italy, South Africa, Switzerland, and the USSR. The entering of a reservation by the United States would not be inconsistent with its major conservation allies. It would not signal deterioration of the United States' commitment to CITES. On the contrary, it would strengthen the United States' commitment to abide by the Berne Criteria and to ensure that listings are credible and that proposals such as the United Kingdom's be supported by valid data. The United States should not support the proposal to avoid possible "harsh criticism by other nations and conservation organizations..." Comments, Natural Resource Defense Council, Inc., May 4, 1981. The integrity and effectiveness of CITES is dependent upon strict adherence to the terms of the Treaty and the listing criteria adopted thereunder.

15. Several comments submitted to the Department misrepresent the position taken by PIJAC at the New Delhi meeting. PIJAC clearly stated that it advocated rational conservation

and management measures along with strict compliance with the Berne Criteria as being essential if CITES is to retain its scientific integrity, its credibility with trade interests, and its credibility with many Party and non-Party nations. PIJAC made it abundantly clear that it opposed wholesale listings because they do not conform to the criteria by any stretch of the imagination. PIJAC also made it clear that the Treaty was not designed to monitor trade or to regulate species when their status is not known. PIJAC further demonstrated its commitment to CITES by being the first non-governmental organization to make a contribution to the Secretariat. Following the vote on the United Kingdom's proposal, PIJAC's representative stated that PIJAC was

> "ready, willing and able to work with producing nations for the purpose of assisting them in implementing a permit procedure even though we have grave doubts as to their ability to meet CITES' standards."

PIJAC's position in New Delhi is not inconsistent with the pet industry's exercising its right to seek a reservation from a non-producing nation, such as the United States. PIJAC's commitment to work with producing nations was not quickly forgotten as alleged by the New York Zoological Society. PIJAC, in fact, is already assisting several producing countries implement the psittacine listing to become effective on June 6, 1981.

WHEREFORE, for the foregoing reasons, the Pet Industry Joint Advisory Council respectfully requests that the United States enter a Reservation to the listing of all Psittaciformes on Appendix II except those listed on Appendix I and the Budgerigars, Cockatiels and Rosey-ringed parakeets. The United States must continue to assert its position that the lists must be credible and that mass listings are appropriate only under limited circumstances, not geopolitical.

Respectfully submitted,

PET INDUSTRY JOINT ADVISORY COUNCIL

By

Marshall Meyers
General Counsel

MEYERS, MARSHALL & YOUNG
TWELFTH FLOOR
1050 SEVENTEENTH STREET, N. W.
WASHINGTON, D. C. 20036

NORMAN L. MEYERS
N. MARSHALL MEYERS
JOANNE W. YOUNG
J. HOWARD MARSHALL
ARTHUR D. SCHAFFER
OF COUNSEL

TELEPHONE
(202) 466-8870
CABLE ADDRESS:
"NORMEY"
TWX 710 822 9887

May 12, 1981

Office of the Scientific Authority
U.S. Fish and Wildlife Service
Washington, D.C. 20240

Re: PIJAC Comments (May 6, 1981)
On CITES Appendices Amendments

Gentlemen:

Upon reviewing the Comments of the Pet Industry Joint Advisory Council, I discovered that a portion of paragraph 8 at page 4 had been inadvertently omitted. The following language is the corrected paragraph 8:

> 8. Proponents of the listing rely upon unsubstantiated statements that "all psittacines" are "heavily traded" and that trade is the real cause of the decline of certain species. As an example of one who parrots the United Kingdom's justification, S. Dillon Ripley, on behalf of the International Council for Bird Preservation, concludes inaccurately that "international trade in parrots may involve a million birds annually." His presumption infers that these birds are predominately wild caught, when, in fact, only a small number involve species which warrant consideration for listing under the Berne Criteria as species whose biological status and/or the impact of trade might render them "threatened". Of the 591,375 birds imported into the United States in FY 1980, 53.5% were psittacine species. Of these, 30% are budgies and cockatiels, an additional 12% are common lovebird species and ring-necked parakeets and approximately 32% are captive bred species. Thus, the number of psittacine species taken from the wild are extremely limited. Furthermore, the United Kingdom's own data reveals that of the 134 "common" species, only 78 psittacines, are found at major trade centers in the United Kingdom, Europe and the United States. It is abundantly clear from the data relied upon by the United Kingdom that the number of wild caught psittecines in trade is far less than alleged in the United Kingdom's characterization of the scope and extent of trade. The trade data simply do not support the listing of the entire order.

I would appreciate it very much if this letter could be attached to the Pet Industry Joint Advisory Council's May 6, 1981, Comments.

Respectfully submitted,

PET INDUSTRY JOINT ADVISORY COUNCIL

By N Marshall Meyers
N. Marshall Meyers
General Counsel

THE AMERICAN FUR RESOURCES INSTITUTE
"America's Oldest Industry"
1901 NORTH FT. MYER DRIVE
ARLINGTON, VIRGINIA 22209
(703) 243-1087

Board of Directors

Chuck Spearman, Chairman
Major L. Boddicker
Parker L. Dozhier
Tom Krause
Duane Pursley

Stephen S. Boynton,
Washington Counsel

Central Office

P.O. Box 550
Sutton, Nebraska 68979
(402) 773-5454
or
(402) 773-4343

STATEMENT

OF THE

AMERICAN FUR RESOURCES INSTITUTE

BEFORE

THE SUBCOMMITTEE ON ENVIRONMENTAL POLLUTION

OF THE

SENATE COMMITTEE ON THE ENVIRONMENT AND PUBLIC WORKS

December 8, 1981

MR. CHAIRMAN: My name is Stephen S. Boynton, Washington Counsel for The American Fur Resources Institute. We sincerely appreciate the opportunity to make a statement before you today concerning proposed amendments to the Endangered Species Act. The American Fur Resources Institute is composed of trappers and fur dealers throughout the United States who have more than a nodding acquaintance with this Act, the regulations thereunder, and judicial interpretation of its implementation.

The American Fur Resources Institute strongly supports the concepts embodied in the Endangered Species Act. The major concern, however, is the manner that this Act is implemented administratively and interpreted judicially. This concern, we believe, is basically the issue before Congress. In short, it is not the intent that Congress has evidenced but the implementation of that intent.

In our judgment the implementation of this Act should always be based upon sound principles of wildlife management and not to be dependent upon the specious arguments of protectionism, emotionalism and hollow rhetoric. It is incredible to us that millions of dollars are raised each year by protectionist organizations and not one cent collected is devoted to research, habitat development or any other aspect of wildlife management for the benefit of any species. Rather, these funds are spent to administer the disruption of professional wildlife management programs throughout the nation on the basis of emotional arguments only. It is not an idle observation that in administrative hearings, judicial actions or in testimony these protectionist organizations never have the support for their causes from individuals or organizations dedicated to the principles of scientific wildlife management.

It is our belief that this Act should not be influenced or administered in one fashion under one Administration and in another manner in a different Administration, particularly when the two extremes are sound wildlife management and protectionism. Rather, the implementation should always be couched in terms of scientific wildlife administration—regardless. We believe it is the duty of Congress to insure that such administration will be consistent and we would trust the Committee approaches any changes in the Act with this thought.

One of the primary issues that has concerned the wildlife community is what has been referred to as the "bobcat issue." Unfortunately, and acknowledged as error, the bobcat (*Lynx rufus*), lynx (*Lynx canadensis*) and river otter (*Lutra canadensis*) were listed on Appendix II at the First Meeting of the Parties of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). 27 U.S.T. 1087, T.I.A.S. No. 8249, ratified by U.S. Senate, 119 Cong. Rec. 28012 (Aug. 3, 1973). Looking at the bobcat and lynx, the Parties of the Convention acted upon a recommendation from the United Kingdom which stated, *inter alia*:

> All cats are potentially involved in fur trade, and the scale of this trade is such that all species must be considered vulnerable, few populations now remaining unaffected. All wild species [of cat except the domestic cat (*Felix catus*)] not in Appendix I should be on Appendix II, so that the scale of their occurrence in trade can be monitored. Berne Meeting Doc. 1.5, Annex I, United Kingdom of Great Britain and Northern Ireland, Supporting Statement 1.2.

Basically, Appendix II listed species are those species thought to be threatened with extinction and require monitoring. Through the provisions of CITES, the bobcat pelt exports could not take place unless the Scientific and the Management Authority determined that export would not be detrimental to the survival of the species. In 1979 the Defenders of Wildlife, Inc., legally challenged the finding that the harvest of bobcats in that season and subsequent export would not be detrimental to the survival of the species. *Defenders of Wildlife, Inc.*, v. *Endangered Species*

Scientific Autority et al., U.S. Dist. Ct. for the District of Columbia, Civil Action No. 79-3060. Bobcat pelts are harvested in thirty three (33) states and the Navajo Nation. After a five (5) day hearing on the injunction the United States District Court for the District of Columbia held that exports could take place from twenty six (26) states and the Navajo Nation but then banned export in five (5) states and portions of two (2). Eleven trappers and fur dealers intervened in that action along with the International Association of Fish and Wildlife Agencies. The case was appealed to the United States District Court for the District of Columbia by both plaintiff and defendants. The case was argued on June 13, 1980. On February 3, 1981, the Court of Appeals ruled that no bobcat export could take place until reliable population estimates were established and a determination made on the number of pelts taken. Defenders of Wildlife, Inc. v. Endangered Species Scientific Authority, No. 79-2512 (Feb. 3, 1981). This Court holding completely rejected all the testimony of expert wildlife professionals in the lower court concerning the method and means upon which harvests are established wherein population statistics are only one of the indica considered and, thereby, substituted its judicial opinion on wildlife management decisions.

The implications of this decision go far beyond the bobcat situation. First of all, no professional wildlife manager concurs that "reliable population estimates" should be the only basis upon which a decision is made to have an annual harvest of any given species. Taken to its logical conclusion, the more numerous the species, the less likelihood that "reliable" population estimates can be obtained. Two examples come to mind. First, in most states there is the rabbit season. To establish a reliable population estimate as to the number of rabbits would be virtually impossible. Another example would be the mourning dove where population estimates would be mere "guesstimates." However, both of these species are under management programs of the state which embodies sound principles of wildlife administration. It is not an idle belief that various anti-hunting and anti-trapping groups will attempt to utilize this decision to further attempt to block annual harvests of various species. This is not an unfounded fear. For example, there was a trapper education bill in the state of Oregon which the trappers supported. The Defenders of Wildlife, Inc., through their lobbyists were able to have an amendment added to that that no trapping could take place in that state unless reliable population "surveys" were undertaken. Fortunately, the bill was defeated but this event certainly bodes ill of what attempts will be made to use the precedent of this court action.

Presently the question of the 1981-1982 bobcat harvest is in jeopardy. The United States has published regulations based on information provided them by the states that the harvest of

1981-1982 season of bobcats would in no way be detrimental to the species and have petitioned the Court to remove the injunction. 46 Fed. Reg. 28192 (May 26, 1981; 46 Fed. Reg. 45172 (Sept. 10, 1981) 46 Fed. Reg. 50774 (Oct. 14, 1981). The Defenders of Wildlife have challenged this position and, although oral arguments have taken place, a decision has not yet been delivered by the Court.

Although the Parties appealed the initial decision of the U.S. Court of Appeals to the Supreme Court, it denied the opportunity to review this issue. Consequently, the relief that is necessary for the far reaching implications of this case is legislation.

Clearly, there is a distinct possibility of a challenge to no-detriment findings for river otter and lynx. Courts may be requested to apply the requirement that wildlife management decisions under the Endangered Species Act include the decisions to add a species to the threatened or endangered species list under Section 4 and the requirement that all Federal agencies "insure that their action will not likely to jeopardize the continued existence of any" species.[1] 16 U.S.C. §§1533, 1536(a). We urge that Congress consider legislation to remedy this position.

As far as the bobcat is concerned, we are informed that that United States will attempt to seek a delisting on CITES based upon the fact that the populations are not threatened. It is our understanding that Canada is seeking to delist the lynx and will so make a formal request at the Fourth Meeting of the Parties of CITES in 1983. It has been further suggested that the river otter is in no way threatened but that it remains on Appendix II for look alike purposes to which we have no objection.

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[1] The Migratory Bird Treaty Act is also affected by this Court decision and Section 3 would need to be amended. 16 U.S.C. §704.

However, given these efforts on behalf of bobcat, river otter and lynx, we hasten to point out that even if such delisting takes place the far reaching negative aspects of this case must be removed to permit the scientific principles of wildlife management to properly function.

The bobcat, river otter and lynx saga, however, illustrates a situation that can only be corrected by Congress. In the future, however, we believe such a similar situation can be avoided. Although the United States is obligated by international agreement under CITES to have a Scientific and Management Authority to determine the status of domestic species, the state governments are, in fact, the entities which have the information, scientific data, and administration of resident wildlife and fish. Consequently, we believe if it is determined that a particular species is not threatened or endangered that information must be accepted by the Federal government. Barring any abuse of discretion or arbitrary and capricious decisions, the Federal government should be mandated to accept that position. Further, if a resolution is made at a CITES meeting to list such a domestic species differently than the states have determined its status, the Federal government should be bound to take a reservation.

Having attended two of the three Meetings of the Parties of CITES, I believe CITES is maturing by treating the Convention as an international trade convention rather than an endangered species convention. However, the United States should not be put in the position of having its quality of wildlife administration dictated to by others outside the United States. As already mentioned, however, the quality our wildlife management efforts in the United States should not be dependent upon a particular Administration. It should be the duty of Congress to ensure that the administration of fish and wildlife in this country will always be based upon sound principles of sound wildlife management rather than emotion and rhetoric.

Presently there are seventy-four (74) nations that are members of CITES. The United States obviously is looked to for leadership in the workings of this body. As the Endangered Species Act is the implementng legislation for CITES, we believe the Congress of the United States must impress upon the Executive that this Convention is one that should be based upon the goals and intent of the Act and not leadership that changes with Adminstrations or personnel. Only by maintaining the impartial standard of scientific data can reasonable commitments be made for the benefit of wild fauna, flora and man.

In 1979 Congress amended the Endangered Species Act to eliminate the Endangered Species Scientific Authority (ESSA) and replace it with an International Convention Advisory Commission (ICAC). 16 U.S.C. §1537(b)-(c) (Supp. III, 1979). Although we believe that this step was a positive one, it is our feeling that such an outside advisory body such as ESSA or an internal body such as ICAC is not necessary. Rather, that any monies that would be directed for such an operation be included for the Office of Endangered Species within the Department of the Interior. As a practical matter, ICAC has ceased to exist since it is now unfunded but Congress should express its opinion by fully abolishing such a body and putting any such international obligation implementaion through the Office of Endangered Species.

We also believe that Congress ought to review the question of experimental populations. The effort to improve conservation of endangered and threatened species, subspecies and populations with the establishment of population addition to those already occurring naturally in the wild is laudable. However, in some cases the establishment of these populations has occurred in areas where such populations never have been in history. With their introduction suddenly these areas become critical habitats. The classic example is the whooping crane. Consequently, we even question whether critical habitag should be designated for such experimental populations. Further, a scheme should be designed where valid objections to the establishment of such an experimental population which includes biological, economic and related areas of concern can be implemented and honored. This mechanism should be especially recognized where states would object to the introduction of such an experimental population on lands over which the Federal government has jurisdiction where there can be come assurance of that experimental population will be confined to some jurisdictions.

We are aware that there has been concern over the definition of critical habitat. We believe that this concept needs to be carefully reviewed along with consideration of other categories in addition to "endangered" and "threatened," such as "experimental," "candidate" and "sensitive." We believe that there should be a review of the definition of "species," especially as it relates to subspecies, populations and captive-bred wildlife.

Courts have had to constantly struggle with certain definitions under the Act and interpret policy as intended by Congress. In the Tellico Dam case Congress reviewed language and determined that "beyond doubt. . .Congress intended endangered species to be afforded the highest priorities" and "the plain intent of Congress in exacting this statute was to halt and reverse the trends toward species extinction, whatever the cost." TVA v. Hill, 437 U.S. 173 (1978). There are such phrases as "to the extent practicable. . . ." [16 U.S.C. §1531(4)]; "to the maximum extent prudent. . . ." [16 U.S.C. §1533(f)(4). It would appear that such phrases can be used to eliminate wildlife management practices by unilateral decisions to achieve the "maximum." Clearly, wildlife management judgment is the key to the administration of this Act. Consequently, it is suggested that such phrases be modified "to the extent necessary" or "to the extent practicable" realizing that there are scientific and commercial considerations to be considered as the 1979 amendment recognized.

We further believe that there must be strict adherence to scientific data before listing endangered or threatened species. Although the Act speaks to the "best scientific and commercial data" available before listing gakes place, all to often species have been listed without sufficient information. 16 U.S.C. §1533(b)(1). To "err on the side of the species" is intellectually dishonest and does not, we believe, reflect the intent of Congress. Very often the proposed list of species does not have a constituency and it is listed without objection. The famous case of the Illinois Mud Turtle (Kinosteron flavescens spooneri) is not a rare exception. When the Office of Endangered Species attempted to list the Illinois Mud Turtle as an endangered species it was necessary for the Monsanto Company to spend considerable time, money and effort to prove that it was not an endangered species. Those responsible for the proposed listing in the Office of Endangered Species had not done a credible job in attempting to list this as an endangered species and such an indictment was underscored by no less than a panel from the National Academy of Sciences. Congress obviously intends the Federal government to have that responsibility but if should discharge it in a professional manner.

One area that we feel should be reviewed carefully in considering the practical implementation of the Endangered Species Act is the question of economic impact of decisions. Since listing is a discretionary decision based upon submitted scientific and commerical data, we feel that the economic considerations of such a listing in terms of practicality should definitely be considered. Clearly, such input has never really considered this factor. We are not suggesting that it should be controlling, but believe it definitely should be part of the list of decision making criteria.

We are also troubled by the "jeopardy" standard contained in Section 7 of the Act. 16 U.S.C. §1536 (Supp. III, 1979).

Although the amendments in 1979 changed the language from "do not jeopardize the continued existence. . .of endangered and threatened species or result in the destruction or modification of habitat of such species. . . ." to "not likely to jeopardize . . . ." ,there is some major question that any real change has been made in practical administration. We believe that a modification would be in order to state that consultation by Federal agencies shall insure "in so far as practical" that any action is not likely to jeopardize.

Mr. Chairman, we sincerely appreciate the opportunity to testify before you on these issues. We look forward to reviewing the specifics of legislation and pledge our cooperation in any way we may be of assistance to the Committee and staff.

STATEMENT OF INTERNATIONAL ASSOCIATION OF FISH AND WILDLIFE AGENCIES TO SENATE SUBCOMMITTEE ON ENVIRONMENTAL POLLUTION CONCERNING POSSIBLE CHANGES IN THE ENDANGERED SPECIES ACT, December 8, 1981

Mr. Chairman, I am William S. Huey, Secretary of the New Mexico Natural Resources Department and Chairman of the Legislative Committee of the International Association of Fish and Wildlife Agencies.

In that dual capacity I appreciate and welcome the opportunity being afforded me to present the views of the Association on an issue to which the organization and its members attach a high degree of importance--the further amendment and reauthorization of the Endangered Species Act.

In addressing that question I would stress at the outset that the Association has been a consistent supporter of this legislation and the concept on which it was based. We worked for its initial passage in 1973 and for adoption of the changes which have been enacted since that time. We are now fully committed to its further extension next year and we clearly recognize the need for continued operation of the Convention for International Trade in Endangered Species (CITES) for which the Act now provides the implementing mechanism.

At the same time, however, we are not blind to the real danger that the reauthorization effort could fail unless the Act is amended in a realistic, practical and workable way to insure that the purposes and intentions for which it was originally conceived by Congress can be more fully realized.

Beyond our fundamental commitment to balanced resource conservation and the fact that our member agencies in this country have a specific responsibility for insuring the well-being of fish and wildlife species, there are other evidences of our interest and involvement in that cause which warrant mention:

...Over 40 states have cooperative agreements with the U.S. Fish and Wildlife Service to carry out endangered species activities. Until the start of this fiscal year they were directly employing over 200 people, in addition to those engaged under contractual arrangements, to carry out programs funded under Section 6 grants-in-aid which are not available under the Fiscal 1982 budget.

...Our state members and the Association have long supported the concept of a non-game program and have worked for passage of model laws to bring all fish and wildlife forms under the management responsibilities of state fish and wildlife agencies and to accord them adequate protection. We are currently working to secure authorization of appropriated funds under the provisions of that Act (Fish and Wildlife Conservation Act of 1980, P.L. 96-366), to get this very important work underway.

...I think it is also significant that at least 13 of the states now have some form of income tax check-off legislation to provide funding, on a voluntary basis, for the conservation and management of non-game species, including endangered forms. For the most part, these measures have had wide public and state legislative support.

Notwithstanding our long-standing commitment to its basic concept, however, we are convinced that the Endangered Species Act is not now doing for the concerned resources what was intended either by the Congress or by those responsible for its implementation. In our view, the Act is in serious trouble and a number of its provisions have resulted in expenditure of needless time, energy and funds--not to mention the alienation of other land and resource users.

The reauthorization issue has consequently been the subject of careful study by this Association through its Endangered Wildlife, Legislative and Executive Committees over the past several months. We have also been working informally with other conservation organizations and with officials of the Fish and Wildlife Service, the Department of the Interior, the National Marine Fisheries Service and the Department of Commerce in an effort to develop viable amendment proposals. The basic elements of our position were considered at the Association's annual meeting in Albuquerque in September, where they were refined, endorsed and approved by the Executive Committee and the general membership. Some of them were also encompassed in three resolutions adopted by the session, the texts of which are attached as Appendix A, and the report of the Endangered Wildlife Committee, attached as Appendix B. Collectively they are reflected in the following recommendations:

1. Abolition of the International Convention Advisory Committee (ICAC). The Endangered Species Act in its original form provided for implementation of the CITES Convention and authorized subsequent establishment, by Executive Order, of an Endangered Species Scientific Authority (ESSA). In 1979, however, the Act was amended to abolish that body and to replace it with the International Convention Advisory Commission (ICAC) to increase accountability to the Secretary of the Interior and to place professional staff responsibility in the U.S. Fish and Wildlife Service. The intent of the amendment was to have ICAC serve as a scientific advisory commission and to streamline implementation of the CITES convention. The result has been quite different than the intent. The responsibilities granted to Interior have been transferred by agreement to ICAC. The end result has been an additional bureaucratic layer which has compounded the entire problem. Its administration has been so complex as to frustrate the basic intent of CITES. Its functions can best be carried out by the Scientific Authority through an expanded wildlife management-oriented professional staff within the U.S. Fish and Wildlife Service. We see absolutely no need for decisions respecting CITES to be removed from the normal and accountable decision-making process that is used for other forms of wildlife, including waterfowl, and for which there are normal appeal processes and referal to the courts where there are disputes. Further the elimination of ICAC would result in the savings of upwards of $300,000 annually.

2. Amendment of "no detriment" determination authority. We propose amendment to Section 8 of the Act to provide that where a state exercises management authority over a species listed in Appendix II of CITES, the determination by the state agency respecting harvest shall constitute the "no detriment" finding under Article IV of CITES. We propose a further amendment to Section 8 stipulating that, where substantial evidence indicates that domestic populations are not endangered or threatened but such populations are so listed by CITES, the United States shall be mandated to take a reservation under CITES procedures. At the present time a limited number of parties to the Convention, present and voting, can list a species on the basis of completely inadequate information concerning its domestic status and with complete disregard not only for that factor but also for the responsibility of state fish and wildlife management agencies in that respect.

The first of those amendments would legislatively overturn the decision of the U.S. Court of Appeals for the D.C. Circuit in the case of Defenders of Wildlife Inc. vs the Endangered Species Scientific Authority (No. 79-2512) which construed Article IV of CITES to require biological information which is difficult to obtain and wholly unnecessary to sound management decisions. The finding of the Court of Appeals in this respect has been rejected almost unanimously by the professional scientific community and the court's mistake in this respect should be rectified by Congress. The decision otherwise would set a potential precedent which could be applied to other listed forms of wildlife. This Association, a party to the court case in question, has now exhausted its legal appeal options and thus must seek legislative relief by asking Congress to specify the type of data necessary and acceptable to implement Convention requirements under Article IV.

3. Establishment of a five-year review of "no-detriment" findings rather than the annual review now required for such species as bobcat, river otter and lynx. It is an unnecessary, time-consuming and expensive procedure for the states wishing to export listed species to annually develop and submit a complete scientific package on the status of the species in question. By the same token, it is an unecessary burden upon the federal administering agency, in this case the Fish and Wildlife Service, to review those findings each year before making a certification.

4. Adoption of language to protect the states from being penalized by federal establishment of critical habitat and other protective features of the Act in cases of state introduction of experimental populations. At the present time, if a state fish and wildlife managing agency wishes to introduce or reintroduce an endangered species, the protective features of the Act (Sections 5, 7 and 9) come into play and prevent the legitimate and entirely safe harvest of both resident and migratory populations. The end result is that the states are reluctant to engage in the restoration of endangered forms and the restrictive provisions of the Act become self-defeating. This subject was addressed in detail by our Legal Counsel, Paul A. Lenzini, before the Subcommittee on Fisheries and Wildlife Conservation and the Environment concerning reauthorization of Section 6. A copy of that statement is attached as Appendix C.

5. Adoption of provisions that regulations developed under the Act or related legislation must be re-evaluated by the Department of the Interior immediately upon reauthorization of the Act, republished for public comment and again no latter than 1984. If not resubmitted, such regulations would expire automatically at the time. The administration of resource management programs, plus changing conditions in the United States, render it inadvisable for outmoded regulations to remain in effect without periodic re-evaluation and public review.

6. Amendment of the Act to ensure minimum funding for state programs under Section 6. The legislative history of the Endangered Species Act of 1973 unmistakably shows that Congress intended that a cooperative, federal-state effort be initiated and sustained. In 1973 the conference report on the legislation stated that "successful development of an endangered species program would ultimately depend upon a good working arrangement between the federal agencies which have broad policy perspective and authority and the state agencies which have the physical facilities and the personnel to see that state and federal endangered species policies are properly executed." The report also noted that the federal government was directing new, innovative, and expensive programs in the states and should, therefore, bear a significant portion of their costs. It further stated that "the grant authority must be exercised if the high purposes of this legislation are to be met." It has been a continuous struggle with successive Administrations and Congress to obtain adequate funding to sustain state programs established under the act and the states are now faced with a complete wipe-out of all grants available under Section 6. Clearly the states cannot help to carry out the intent of the Congress unless that situation is remedied. In this particular instance the federal government, by action of the Congress pre-empted state authority for the management of endangered resident forms but requested, and made provisions for, the states to cooperate in their management.

State efforts to get the necessary federal financing for that cooperative effort have, however, been consistently resisted and now seem to face total denial. That situation demands remedy and we urge that a provision be written into the reauthorization bill specifying that both federal and state agencies benefit from any moneys appropriated for endangered species programs and that any increases or decreases in appropriations be shared on a pro-rata basis by this federal-state partnership. We also recommend that the cost-sharing formula be changed to provide that the federal share be three-fourths and the state share be one-fourth of the cost of covered programs.

Mr. Chairman, we believe changes of the type we have proposed are appropriate and necessary if the Act is to more accurately reflect the original intent of Congress. We have, however, limited our suggestions to those matters of the most direct interest to this Association and we recognize that these are by no means the only possibilities for improving the legislation.

Be assured that this Association and its members will give full and careful consideration to additional suggestions which may be offered and that we will be prepared to support any which we are persuaded may contribute to the objective of a more viable and effective Endangered Species Act.

It will be our privilege and pleasure to work with your Subcommittee and its staff in any way we are able in pursuit of that goal.

Meanwhile, thank you for allowing us to share our views with you this morning

Resolution No. 7

International Convention Advisory Commission Under The Endangered Species Act

WHEREAS, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) requires each Party nation to have a Scientific Authority and a Management Authority; and

WHEREAS, the Endangered Species Act, as amended, established the International Convention Advisory Commission (ICAC) to make recommendations to the Secretary of the Interior, or his designee, on all matters pertaining to the responsibilities of the Scientific Authority under the terms of the Convention; and

WHEREAS, experience has demonstrated that ICAC has fostered recommendations and policies inconsistent with sound wildlife and fisheries management practices; and

WHEREAS, the Endangered Species Act will be subject to reauthorization by the Congress in 1982;

NOW, THEREFORE, BE IT RESOLVED that the International Association of Fish and Wildlife Agencies urges the Congress to abolish the International Convention Advisory Commission (ICAC) on the ground that its record has not reflected the best interests of sound wildlife management principles, that its continuation would be an unneeded expense and that its functions can best be carried out by the Scientific Authority through an expanded wildlife management-oriented professional staff within the U.S. Fish and Wildlife Service.

Resolution No. 8

Reservations Under The Convention On International Trade In Endangered Species Of Wild Fauna And Flora

WHEREAS, regulations implementing the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in the United States include a list of wildlife and plant species for which imports and exports are controlled as determined by the procedures set forth in CITES; and

WHEREAS, Activle XV of CITES provides that any Party country may enter a reservation on a listing during the ninety (90) days immediately following its adoption; and

WHEREAS, the United States failed to take reservations on the listing of bobcat (**Lynx refus**), lynx (**Lynx canadensis**) and river otter (**Lutra canadensis**) when these species were placed on Appendix II at the First Meeting of the Parties in Berne, Switzerland, in 1976 when the entire family **Felidae**, except the domestic cat (**Felix catus**), was so listed; and

WHEREAS, the scientific evidence provided by the various state management Authorities demonstrated that these species are not threatened to be endangered and that the listing on Appendix II was inappropriate; and

WHEREAS, it is recognized that the data on the status of various species of wildlife provided to the government of the United States through the Scientific Authority in the Department of the Interior is derived from state wildlife authorities; and

WHEREAS, the Endangered Species Act which implements CITES will be subject to reauthorization by the Congress in 1982;

NOW, THEREFORE, BE IT RESOLVED that the International Association of Fish and Wildlife Agencies urge the Congress to adopt an amendment to the Endangered Species Act which mandates that, in the case of states having management authority for a given species and providing data as to its status, such status must be accepted by the United States, and if a listing is proposed to the Appendices of CITES which is in conflict with the status established by the state management authorities, the United States must take a reservation under the procedures of CITES.

Resolution No. 9

Regulations Under The Endangered Species Act

WHEREAS, a large body of regulations has been developed under the Endangered Species Act since its initial passage; and

WHEREAS, many of these regulations are unnecessary to carry out the purposes and intent of the Act, such as the regulation concerning the importation and exportation of all wildlife [45 Fed, Reg. 86496 (Dec. 31, 1980)]; and

WHEREAS, the Endangered Species Act is subject to reauthorization by Congress in 1982;

NOW, THEREFORE, BE IT RESOLVED that the International Association of Fish and Wildlife Agencies urges Congress to reflect in committee report language on such extension legislation the view that regulations under the Endangered Species Act should be limited to those regulations necessary to carry forth the spirit and intent of the Act only, and that regulations that go beyond such basic need should not be proposed and, if in existence, should be rescinded.

RECEIVED NOV 2 3 1981

I A F W A

International Association of Fish and Wildlife Agencies

1412 16th STREET, N.W. WASHINGTON, D.C. 20036 (202)232-1652

Jack H. Berryman, Executive Vice President

MEMORANDUM October 14, 1981

TO: Members, Endangered Species Committee, International Association of Fish and Wildlife Agencies

FROM: Robert M. Brantly, Chairman Robert M. Brantly

SUBJECT: Amendments to the Endangered Species Act

During meetings in Albuquerque, the Endangered Species Committee, and subsequently the Association, approved the amendments preliminarily agreed upon by the Wildlife Legislative Fund, the Wildlife Management Institute, the Wildlife Society, Ducks Unlimited and representatives from the Association's legislative committee. These recommendations were:

1. Abolition of the International Convention Advisory Commission (ICAC), with possible expansion of the existing Scientific Authority to accommodate certain of the Commission's responsibilities.

2. Amendment of the Act with language eliminating the impact of the decision of the U. S. District Court of Appeals barring harvest of bobcats in the absence of "reliable population estimates" and control of the number of animals taken.

3. Adoption of a provision that regulations developed under the Act or under related legislation must be reviewed by the Department of Interior and republished for public comment no later than 1984. If not resubmitted, they would expire automatically at that time.

4. Development of language providing that states not be penalized through establishment of critical habitat on the basis of introduction of experimental populations. This is to avoid jeopardizing the legitimate taking of resident and migratory populations.

5. Adoption of language providing that the Scientific Authority would be bound by management decisions of individual states relating to status of resident fish and wildlife populations from a standpoint of endangerment. The language would also stipulate that where evidence indicates a domestic U. S. species population is not endangered but the same species is listed by CITES as endangered or threatened, the U. S. would be mandated to take a reservation from that listing.

6. Establishment of a five year review of "no detriment" findings rather than the annual one year now applying in the case of bobcat, river otter and lynx.

7. That the Act specifically designate the management of endangered wildlife as a shared federal-state responsibility and require federal adherence to its contractual obligation to states for grant-in-aid assistance under Section 6 to meet that objective. The Association further expressed its desire that the Act be amended to ensure a minimum funding for the states' programs and that the cost-sharing formula be changed to one-fourth state, three-fourth federal.

The Association's recommendations for amendments to the Act will be finalized at the Executive Committee meeting to be held in Washington on December 10. Please advise me of any comments or suggestions you may have so I can convey them to the Executive Committee on or before that date.

As most of you know, there has been a problem with experimental populations and one of the proposed amendments is to deal with this problem. New Mexico has proposed a new section to the Act, which I am enclosing, with a letter of explanation from Director Olson for your information and comments.

Finally, the committee during its meeting in Albuquerque, requested information from the Service regarding their budget for endangered species. I am enclosing a letter from Mr. Harold O'Connor in response to this request.

Dlrd3/18-19
Enclosures
cc: Mr. Charles Fullerton
Mr. Jack Berryman
Mr. Ron Somerville
Mr. Larry Jahn
Mr. Andy Oldfield

STATEMENT OF THE INTERNATIONAL ASSOCIATION OF FISH AND WILDLIFE AGENCIES BEFORE THE SUBCOMMITTEE ON FISHERIES AND WILDLIFE CONSERVATION AND THE ENVIRONMENT CONCERNING REAUTHORIZATION OF SECTION 6 OF THE ENDANGERED SPECIES ACT OF 1973

[illegible]

Mr. Chairman, I am Paul A. Lenzini, Legal Counsel for the International Association of Fish and Wildlife Agencies, an association whose government members include the fish and wildlife agencies of all 50 states. We appreciate this opportunity to testify to the need for additional funding authority for state activities under Section 6 of the Endangered Species Act, and to bring to your attention a problem that has developed with respect to experimental populations of endangered species.

First, we would draw attention to the fact that legislative history of the Endangered Species Act of 1973 unmistakably shows that Congress intended that a cooperative federal-state effort be mounted. The 1973 conference report stated that "successful development of an endangered species program will ultimately depend upon a good working arrangement between the federal agencies, which have broad policy perspective and authority, and the state agencies, which have the physical facilities and the personnel to see that state and federal endangered species policies are properly executed." The conferees noted that the federal government was directing new, innovative and expensive programs on the states and should therefore bear a significant portion of their costs. The conferees also stated that "the grant authority must be exercised if the high purposes of this legislation are to be met."

The performance record of the past few years suggests that the good intentions of Congress with respect to adequate funding of state programs have not always been matched by the actions of the Executive Branch. Last year the states were faced with a Section 6 funding request by the Fish and Wildlife Service that would have resulted in a 40 percent reduction in state programs. With the support of Congress, $2 million was added to the Fish and Wildlife Service appropriation at the last minute and a near collapse of this cooperative work was narrowly averted.

An even more serious situation exists with respect to funding for the 1981 fiscal year. There remains only $4 million of the $16 million funding authority under Section 6 approved in 1978, so that the Fish and Wildlife Service has requested only that amount in its budget request for F.Y. 1981. That is a reduction of $1 million from the $5 million available in the current fiscal year. Worse, it fails to recognize that the states have responded to the call of Congress and the Service and have continued to develop their programs to the point where their planned funding needs for fiscal year 1981 exceed $7.4 million. Thus the federal budget will result not only in a severe cutback, it will force a postponement of work planned that has been urged on the states by the federal government ever since the Act was passed.

Succinctly, we ask for funding authority of $7 million, $9 million, and $11 million for fiscal years 1981, 1982, and 1983 to permit the state programs to develop as Congress intended. We believe these amounts are realistic in terms of what the states can and should do, and that they will permit the states to take over some of the specific work of the federal government, thus at least freeing position ceilings in the Fish and Wildlife Service for other critically important work in this field.

We are limiting our request for Section 6 authority to three years because the Section 15 funding authority under which the Fish and Wildlife Service operates also expires in that year. We urge the committee to synchronize these reauthorizations, so that it will be possible for you to consider the full scope of the program, federal and state, simultaneously in 1983, and also avoid the risk of additional exposure of the Act to undesirable amendments.

There is another major request that we urge the committee to consider. That is the desirability of changing the state-federal matching ratio from 1/3 - 2/3 as it is at present, to 1/4 - 3/4 as are the other primary matching funds programs, the Pittman-

Robertson and Dingell-Johnson programs, on which the state fish and wildlife agencies regularly depend for a substantial portion of their annual funding. Our reason for suggesting such a change is simply that with the wave of spending limitations that have spread through the state legislatures across the land, the states are finding it increasingly difficult to secure general funds to support wildlife conservation work not related to hunting and fishing. Additionally, there is the problem of inflation which has severely limited the ability of the state agencies to keep up with the regular demands made upon them.

If Congress were to agree with the change in the apportionment formula, there would have to be an equivalent increase in federal expenditures to compensate for the reduction in state contributions. To maintain parity with the figures previously recommended based on the 1/3 to 2/3 matching formula, the federal spending authority, on a 1/4 to 3/4 matching basis, would have to be as follows:

F.Y. 1981 - $9,000,000
F.Y. 1982 - $11,000,000
F.Y. 1983 - $13,000,000

Obviously, projections beyond three years become increasingly speculative. However, we are confident that by the time it is once again necessary to reauthorize the Endangered Species Act it will be possible

Committee. These proposals will be reviewed by the Association's Executive Committee, but that action is scheduled for the afternoon of Sunday, March 23. We believe we can suggest a legislative approach to this difficulty that would be useful to the committee following the conclusion of the Association's meeting this Sunday.

Thank you for the opportunity to submit these comments.

TESTIMONY OF

JAMES H. GLASS

PRESIDENT, WILDLIFE LEGISLATIVE FUND OF AMERICA

Mr. Chairman, I am Jim Glass, President of the Wildlife Legislative Fund of America. The WLFA is a non-profit corporation formed specifically to defend sportsmen and scientific wildlife management practices against legislative and legal actions brought by those who attempt to outlaw hunting, trapping and fishing, and those who try to destroy wildlife management as we know it in the United States today.

We provide legal defense, lobbying and public education services in pursuit of our purposes. Individuals and organizations contribute to us for two reasons: (1) so that sportsmen and others genuinely interested in scientific wildlife management practices can speak as one, and (2) so that, singly, they will not have to duplicate the professional services we offer. Contributors include national, state and local sportsmen's organizations throughout America, such as Ducks Unlimited, Game Conservation International, Mzuri Safari, Shikar Safari Club International, the American Foxhound Club, and Masters of Foxhounds of America. They include associations such as the American Fur Industry, the National Association of Sporting Goods Wholesalers and the American Archery Council. They include cattle, sheep and agricultural interests. They include corporations such as Woodstream and Owens-Illinois.

We work in every state in the Union as well as in Washington. For example, in 1980 we spent over a quarter of a million dollars, and provided legal, advertising and political campaign services, to win state-wide referenda campaigns in Oregon and South Dakota. The Oregon victory was against attempts to outlaw trapping. The South Dakota victory was against attempts to outlaw dove hunting. In a typical year we are involved in 15-20 state legislative campaigns to benefit sportsmen.

The Wildlife Legislative Fund in headquartered in Columbus, Ohio. Randal Bowman, who accompanies me today, is our Director of Federal Relations and in charge of our Washington D.C. activities.

We are here today to suggest a number of changes in the Endangered Species Act which we believe will strengthen the credibility of the Act and improve its effectiveness. These proposals largely revolve around strengthening the role of the States in the decision-making process, and in correcting some specific problems which have arisen under the Act, and under implementation of the CITES treaty.

Before I summarize these proposals, however, I would like to briefly address the role of sportsmen in conservation and wildlife management. There are a growing number of organizations which are involved in environmental and conservation issues, organizations which speak from a wide spectrum of viewpoints. Because of this, it is sometimes easy to lose sight of the role of the sportsmen in the conservation movement.

All of the organizations, including those representing sportsmen, lobby for legislation that reflects their view of how best to protect the environment and our wildlife and other resources. All attempt to educate the public, and all from time to time end up suing the government to insure that programs are carried on in the manner they believe best.

In most cases, however, the effort stops there. This is particularly true of those groups which so emotionally condemn hunters and hunting. I would just like to remind the Committee that for sportsmen, these legislative, legal and educational efforts are merely the beginning of their conservation activities. They also provide the one ingredient without which all of the activities of all the groups you will be hearing from would be meaningless - and that ingredient is money.

Simply stated, sportsmen provide the lion's share of the funds which are used for virtually all of the wildlife and habitat protection programs. A 1979 study by our organization found that hunting and fishing license fees -

paid by sportsmen - raised over $350 million yearly for conservation programs. The Pittman-Robertson Act, the primary source of federal assistance to state wildlife agencies, is financed solely by an excise tax on hunting equipment - a tax strongly supported by sportsmen's organizations. Since its inception in 1937, the Pittman-Robertson Act has resulted in over a billion dollars being distributed to the States for wildlife programs. The Dingell-Johnson Act, a similar program for sport fishing, is contributing over $33 million per year - money again paid by sportsmen.

I would further note that these sources of funds constitute better than 75% of revenues of the State fish and game departments.

Nor do sportsmen stop there. There are a number of groups actively working to protect habitat and otherwise enhance the survival of various species. We are proud to have perhaps the most active of these as a contributor to the Wildlife Legislative Fund - and that is Ducks Unlimited. This one organization, funded almost entirely from contributions from sportsmen does more for wetlands protection than any other organization in North America.

A few figures from recent DU testimony before a House Subcommittee might be useful here. They have spent, to date, over $100 million on habitat protection, via long-term easements, in Canada. Over 3 million acres are protected, and nearly 2 million of those are actively managed. These lands are home to over 300 species of animals and birds,. including endangered species such as the whooping crane.

Support for DU has grown within the sportsmen's community to the extent that DU now plans to spend $1 million per week - a quarter of a billion dollars - through 1986, on habitat protection in Canada, Mexico and the United States.

Thousands of other sportsmen's organizations throughout the United States contribute millions of dollars annually to the improvement and management of wildlife habitat at the state and local level.

Finally, I would point out that while these programs are aimed primarily at game animals, all species benefit from habitat protection programs. For example, during the recent midwestern drought, over 75% of the prairie wetlands in Canada went dry - while over 75% of the lands protected by DU retained their water, to the great benefit of all wildlife.

I believe it would be fair to say that if it were not for the efforts and money of sportsmen, there would be severely reduced wildlife populations for us to attempt to protect.

I have digressed somewhat because I believe it is important to establish the role sportsmen play in conservation - particularly at a time when emotional attacks on hunters and hunting are increasing, and when false claims are made that hunting is a cause of endangerment of species.

The Wildlife Legislative Fund, along with all other sportsmen's groups, supports the Endangered Species Act. Our interest is in maintaining the Act, and in improving its credibility. There unfortunately have been a number of actions in the area of protecting allegedly endangered species - not all of which were under the authority of the Endangered Species Act - which in our judgement have damaged the credibility of the various endangered species programs. Examples include the ban on importation of leopard trophies from East Africa and the CITES listing of bobcats and other species not in need of protection.

Probably the most damaging of all as far as sportsmen are concerned is the specific listing in the Endangered Species Act of sport hunting as a cause of endangerment. All these serve to damage the credibility of the Act.

Accordingly, we are proposing a series of changes in the Act. As I had mentioned, their primary focus is to enhance the role of the States in the decision-making process. The federal government does not have management authority over most species, nor does it have sufficient resources to assume management.

Yet there have been repeated complaints from the States that their input, particularly in the decisions to list species, has been ignored.

We are proposing that if a State management authority with jurisdiction over a species proposed for listing under the Act objects to the listing, and is prepared to accompany that objection with biological data, the Department of the Interior would be required to hold a formal hearing on the matter. Any decision to proceed could only be made on the administrative record of the hearing. For non-resident species, we propose that the Secretary be required to formally request the opinion of any government with jurisdiction over the species proposed for protection, with an objection again triggering the hearing process.

With respect to CITES, we propose that in any case where a domestic species is listed by the convention, and that species is not on the Endangered Species list, the United States would be required to take a reservation.

We propose that the Act specify that no protection may be given to any species that is the current object of damage control or other governmental actions aimed at curbing depredations of that species on man, domestic animals or food crops.

We strongly suggest that language in the Act which lists sport hunting as a cause of endangerment of species be deleted, inasmuch as it is simply untrue for domestic species. In the unlikely event that unregulated hunting in a foreign nation might present a danger to a species, we note that language covering "other natural or man-made factors affecting its existance" would still permit its protection.

We urge the Congress to overturn the U.S. Court of Appeals decision in Defenders of Wildlife v. Endangered Species Scientific Authority, which required, contrary to all wildlife management practices, "reliable population estimates" for establishment of "no detriment" to the species in order to permit export of bobcat under CITES. Population estimates are rarely used in wildlife management programs. The effect of such a requirement for establishment of a deer, rabbit or waterfowl season would be to prohibit hunting of the species.

We have several other proposals, and these, along with a more detailed explanation of those I mentioned, are attached to the testimony.

I would welcome any questions you might have.

THE WILDLIFE LEGISLATIVE FUND OF AMERICA
To protect the Heritage of the American Sportsman to hunt, to fish and to trap.

AMENDMENT PROPOSALS FOR THE ENDANGERED SPECIES ACT

The Wildlife Legislative Fund of America and the sportsmen and wildlife managers it represents strongly support the legal protection of endangered and threatened species, in accordance with the intent of Congress in enacting the Endangered Species Act.

The Act has been abused by those who have urged extreme positions not in accord with reality. Species have been listed as endangered or threatened when they were not. Extreme interpretations have been made, evidently on the assumption that all questions should be resolved in favor of listing. A concomitant theory that we have perceived in this has been the unstated (or sometimes stated) belief that consumptive use of animals is wrong, and that the Endangered Species Act creates a climate in which all taking of animals might ultimately be outlawed.

The result has been to reduce the credibility of a legitimate law and to create a level of cynicism that has produced a movement for repeal of the Endangered Species Act in its entirety.

To us, that solution would be an extremity in the other direction. It is our wish that the law be amended to provide a balance so that the law may be credible, effective, and supported by all those who wish to see truly endangered and threatened species protected.

The following proposals for amendment are offered in this spirit.

PROBLEM AREAS:

1. Unjustified Listings

The most frequent complaint we have received about the Endangered Species Act, and its underlying treaty, the Convention on International Trade in Endangered Species (CITES), relates to the unjustified listing of species as endangered or threatened. (See pp 4 & 5 on the relationship between the Endangered Species Act and CITES.)

The Act as presently written facilitates the listing of species, in that only a proposal for listing in the Federal Register, a period for public comment, and a final publication in the Federal Register are required to list a species.

Including species which are in no way endangered or threatened destroys the credibility and effectiveness of the Act.

There are several actions that may be taken in this area:

A) Amend the law to provide that when any State in which a species is resident objects to a proposed endangered or threatened classification, the species could not be listed as endangered or threatened in that State until after a formal administrative hearing at which the objector would present biological data. Any interested party could participate. A decision to list the species would have to be based upon the hearing record. For foreign species, a similar procedure could be initiated by any country in which the species is resident. Similar procedures should be provided for de-listing of species already listed.

B) Require that designations of "endangered" or "threatened" be made by State, and by foreign country, in which a species is resident. A species might be endangered throughout the majority of its range, and yet still be present in sufficient numbers in some areas to constitute a nuisance or threat. A prime example of how this approach could benefit sportsmen is the case of the leopard. Ignoring for the moment the question of whether there is any justification for it being designated as "endangered" at all, it clearly seems that it is not endangered in East Africa, and the Fish and Wildlife Service is now proposing to recognize this and permit the importation of leopard trophies from that area. Had a country-by-country approach been in effect at the time of the original listing, it would have been much easier for sportsmen to have challenged the listing. Such an approach would have to be coupled with a requirement that the species be endangered throughout the majority of its range before any listing is contemplated, or situations would be encountered where a species would be listed as endangered in "spillover" areas where it may be encountered from time to time, even though the area is not normally part of its range.

C) With respect to CITES listings, the United States would have to take a reservation if the species is not listed as endangered or threatened under the Endangered Species Act. This would have prevented the entirely unnecessary problems that have occurred respecting the bobcat, lynx, and river otter, for example.

D) For non-resident species listed under CITES, require USFWS to formally request comments for every listing as to whether the United States should take a reservation.

2. Seizure During Transshipment

There have been numerous cases where a species listed as endangered under the Endangered Species Act, but legally takeable and possessable in other countries, has been passing through the United States from the country where it was taken to a third country where it may be possessed, and has been seized by the Fish and Wildlife Service. Although the

USFWS is reportedly planning to alter its regulations to stop this, the Act should be amended to incorporate the CITES provisions on the subject, which exempts articles (i.e. trophies) from the provisions of the law while they are in transshipment and under Customs control.

3. The International Convention Advisory Commission

This body, created by the Endangered Species Act although not required by CITES, is supposed to function as a scientific advisory body to the Secretary of the Interior on CITES matters. Although its budget and staff were abolished by the recent budget cuts, it is still in existence. The recommendation is that it be abolished as unnecessary. This body has consistently recommended the listing of species that were neither endangered nor threatened, as a result of pressures by protectionist organizations. Decisions should be based upon scientific data provided by professional wildlife managers.

4. The Bobcat Suit

This is also a CITES matter, but with serious implications for wildlife management and hunting in general. The Defenders of Wildlife filed suit to halt the export of bobcat pelts under the provisions of CITES, claiming the government did not have adequate information upon which to make a required decision that the harvest would not have a "detrimental" impact upon the species. The court, ignoring accepted wildlife management practices, decided that "reliable population estimates" must be obtained before seasons could be established.

There are three actions which are indicated as a result of the decision:

A) Amend the portion of the Endangered Species Act which implements CITES to establish that population estimates are not a necessary element in a determination that export is not detrimental to a species, and that population trend data may be used.

B) Require a 5-year, not yearly, review of the "no-detriment" findings under CITES. This would bring the CITES provisions into line with the Endangered Species Act requirements for 5-year status review, and eliminate what offers to be an unending series of yearly lawsuits by Defenders over the bobcat harvest. The statutory requirement could be in the form of a 5-year management plan to be approved by USF&WS, reviewable earlier than 5 years in the event of an emergency.

C) Add language to the Committee reports placing the Congress in strong support of the Interior Department's plans to move for a delisting of the bobcat by the CITES parties.

5. Experimental Populations

To encourage establishment of experimental populations of endangered or threatened species, the Act should be amended to insure that the establishment of experimental populations does not result in the imposition of a critical habitat declaration on the area into which the species is being introduced. Under present procedures, when an endangered species is introduced into an area the declaration of new "critical habitat" prevents normal management of other species, resulting in opposition to the introduction.

6. Specific Language In The Act

There are instances in the Act where language is used that is not only inaccurate and unfair to hunters, but invites a prejudicial interpretation in the event of a suit involving hunting and the Act. Examples include Sec. 4(a) (2) which lists sporting purposes as a cause of endangerment, and Sec. 3(3) where regulated taking to relieve population pressures is noted as an "extraordinary" situation.

The relationship between the Endangered Species Act and CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora)

CITES is a treaty to which the United States and a number of other countries are parties. The Endangered Species Act as its "implementing legislation".

Regulations to effectuate CITES are adopted under the Endangered Species Act.

However, CITES is directed at import and export of animals and plants, while the Endangered Species Act in addition controls domestic handling of affected species.

CITES concerns three categories of animals and plants:

Appendix I: all species threatened with extinction which are or may be affected by trade.

Appendix II: all species which although not necessarily now threatened with extinction, may become so unless trade in specimens of such species is subject to strict regulation (etc.).

Appendix III: all species which any Party identifies as being subject to regulation within its jurisdiction for the purpose of preventing or restricting exploitation (etc.).

For Appendix I species, one must have a permit to export, which may be granted only if the Scientific Authority of the Party state (in the United States this is the U.S. Fish and Wildlife Service) advises that export will not be "detrimental to the survival of that species". Other conditions for export include existence of an import permit for the country of destination.

To import an Appendix I species, one must have an import permit, with requirements similar to those for the export permit, including existence of an export permit from the country of export.

Requirements for export of an Appendix II species are quite similar to those for an Appendix I species, except that no import permit must be shown.

Concerning Appendix II species CITES requires:

> "Whenever a Scientific Authority determines that the export of specimens of any such species should be limited in order to maintain that species throughout its range at a level consistent with its role in the ecosystems in which it occurs and well above the level at which that species might become eligible for inclusion in Appendix I, the Scientific Authority shall advise the appropriate Management Authority (also the USFWS) of suitable measures to be taken to limit the grant of export permits for specimens of that species."

For Appendix III species, the main condition for export is that the specimen was not obtained in contravention of the laws of the state of export for the protection of fauna and flora.

The Endangered Species Act applies to any species which is in danger of extinction throughout all or a significant portion of its range (other than certain pest insects), and also to "threatened species" which are any species likely to become endangered species within the foreseeable future throughout all or a significant portion of its range."

It can be seen that endangered species are similar to CITES Appendix I species, and threatened species are similar to CITES Appendix II species. (See underlined language on page four).

The Endangered Species Act consists of detail for determining endangered and threatened species, procedures for cooperation with states, interagency cooperation, international cooperation, creation of advisory and administrative bodies, and prohibited acts and penalties. It puts teeth in CITES, but also specifies domestic control of the affected species. The maximum criminal penalty, for knowingly violating the law, regulations, or permit conditions, is $20,000 fine or one year in prison, or both.

December 8, 1981

WILDLIFE MANAGEMENT INSTITUTE

Dedicated to Wildlife Restoration
WIRE BUILDING, WASHINGTON, D. C. 20005

Statement of Lonnie L. Williamson
before the
Subcommittee on Environmental Pollution
Senate Committee on Environment and Public Works
on
Endangered Species Act of 1973
December 8, 1981

Mr. Chairman:

I am Lonnie L. Williamson, secretary of the Wildlife Management Institute. Headquartered in Washington, D.C., the Institute has promoted the restoration and improved management of wildlife and associated renewable natural resources for more than 70 years.

We believe that the Endangered Species Act of 1973 is necessary legislation that must be continued if certain of the nation's important wildlife are to be perpetuated. But we believe also that there are some changes that could be made in the Act to improve the national endangered species management program.

Critical Habitat

One of the more controversial aspects of the current federal program is critical habitat designation. Such designations undoubtedly restrict the type and extent of activity that can be accommodated within their boundaries. Protecting and improving habitat, however, is the most basic and important management action required to perpetuate and restore endangered species populations. Without it, other efforts are futile.

We realize that some critical habitat designations may cause problems sometime in the future, if carried to an extreme under the current Act. It is quite possible that numerous listings of invertebrates, especially insects, as endangered and subsequent critical habitat designations could get out of hand. If this were to be the case, a line will have to be drawn somewhere. And it will be difficult to draw that line and in effect say, "these animals' habitat will be protected and those animals' won't." Nonetheless, such a situation, plus the fact that limited resources are available for endangered species management, would suggest that priorities may have to be set. Some tough choices on whether to protect the habitat of certain lower life forms would have to be made. We recommend that the Subcommittee give this problem serious thought in developing legislation to reauthorize the Act.

International Convention Advisory Commission

The Institute suggests that the International Convention Advisory Commission could be abolished without detriment to endangered species management. It has served no useful purpose, in our view, and its demise would permit authorized funds to be invested in more important endangered species activities. The Scientific Authority for the Convention on International Trade in Endangered Species (CITES) is a responsibility of the Interior Secretary. The Secretary has at his disposal in the U.S. Fish and Wildlife Service ample expertise to serve as the Scientific Authority and as advisors. Additional expertise is available in the National Marine Fisheries Service.

Appeals Court Decision on Bobcat

The U.S. District Court of Appeals' decision to mandate "reliable population estimates" before bobcat pelts may be exported under CITES requires wildlife agencies to gather more detailed information than is necessary to manage populations of that species. Furthermore, there is apprehension that the court decision ultimately may be interpreted to require similar wasteful expenditure of scarce funds to compile other unnecessary estimates of various other wildlife populations before they may be taken for any purpose. The status of bobcats and most other wildlife are monitored by use of population trend data and habitat analysis rather than by actual counts which are extremely difficult and expensive, and in many instances, impossible. Relative numbers are much easier to obtain and completely adequate to use when setting seasons and bag limits for taking most wildlife. This obviously is the case since many depleted populations have been restored during this century using that reliable and professionally accepted method. We believe, therefore, that the Endangered Species Act should be amended to eliminate the negative impact of the court decision on sound wildlife management programs.

Experimental Populations

Recent experience has revealed that critical habitat designations can discourage state wildlife agencies from introducing or reintroducing endangered species into new areas. Such a designation could prevent normal management activities for other species, including a prohibition of taking those nonendangered animals. Thus, the states are reluctant to introduce experimental populations under these circumstances, and restoration of endangered species is hindered. We recommend that the Act be amended to permit experimental populations to be established without the normal restrictions associated with critical habitat designation.

Listing

The Institute believes that the Endangered Species Act should be amended to make the national effort to manage endangered species a more cooperative federal-state venture. The success of the endangered species program hinges largely on cooperation of state and federal wildlife agencies. We believe, therefore, that there should be agreement among the U.S. Fish and Wildlife Service and involved state wildlife agencies before any resident species is listed under the Act as endangered. The Act should be amended to require such joint agreement. We also believe that the U.S. should be mandated to take a "reservation" on species listed under CITES but not listed under the Endangered Species Act. This would return control of the U.S. endangered species program to the hands of U.S. agencies, both federal and state, with appropriate professional staffs rather than leave it in the emotion-ridden arena of multi-national fiat. This would end the present situation that finds wildlife management programs in this country penalized because of the failure of other nations to get their own programs into gear.

We appreciate the opportunity to comment on the Endangered Species Act and invite the subcommittee to call on us for any assistance we may provide in helping develop specific language for a reauthorization bill.

STATEMENT OF THE
NATIONAL WILDLIFE FEDERATION

On behalf of the National Wildlife Federation ("NWF"), I appreciate this opportunity to comment on the Endangered Species Act of 1973, as amended ("ESA").

NWF is this nation's largest, not-for-profit, citizen conservation-education organization with over 4.5 million members and supporters in all fifty states, Guam, Puerto Rico, and the Virgin Islands. NWF has a strong and continuing interest in the protection of endangered species.

NWF has consistently expressed support for protection of endangered species through resolutions at our Annual Meetings (Appendix 1). NWF's 1956 National Wildlife Week theme was "Save Endangered Species" and we have been involved in numerous legal efforts to see that endangered species are protected. For years we have disseminated information on endangered species. Since 1970, NWF has distributed over 650,000 pieces of literature on endangered species. This year our National Wildlife Week Theme, "We Care About Eagles", again focuses on an endangered species. As part of this campaign, over 480,000 education kits and 325,000 posters will be distributed to call attention to the plight of eagles.

Public support for endangered species is strong. A July 1981 poll showed that 91% of the members of the NWF believe that endangered species listings should be continued whenever biological evidence warrants it, and 75% believe that endangered species must be protected even when it blocks commercial activity. These results mirror those of a general poll conducted by the President's Council on Environmental Quality in 1980 that found that 73% of the U.S. public believes that endangered species must be protected even at the expense of commercial activity.

The long and painstaking development of the ESA clearly demonstrates a Congressional commitment to the conservation of these species and their habitat that parallels this public support (Appendix 2). This commitment should not be overlooked as we consider reauthorization of the ESA.

This generation has a responsibility to future generations to ensure that species are prevented from becoming extinct. We are, however, not now meeting that responsibility. The loss of biological species and the concomitant loss of tangible economic and scientific benefits is increasing at an alarming rate. The danger of losing many species is real and immediate. Habitat destruction, land management practices, introduction of non-native species, environmental contamination, and commercial exploitation have greatly accelerated the disappearance of the earth's species. In the United States, 47 species of animals became extinct between 1700 and 1970. Twenty-five of those (53%) vanished between 1920 and 1970. Worldwide, as many as ten percent of all species may be endangered and in need of protection. Many factors account for the present accelerating extinction rate, now at one species per year. Only the proper protection and management of habitat will reverse this trend. Without appropriate habitat, endangered and threatened species as well as all other species will not survive.

The disappearance of species caused by human activities adversely affects the world's food supply, human health, and our ability to conduct scientific research, and may ultimately interfere with man's own survival. These losses also make the world we live in much less interesting. In light of the above, NWF believes that all species must continue to be protected under the ESA and we encourage Congress to reauthorize a strong Act. It is important to note that we call for the protection of all species. The genetic and species diversity present today is the result of millions of years of evolution. The loss of any species and the resulting loss of biological diversity cannot be reversed and is thus awesomely final.

A strong and effective Endangered Species Act is essential for the protection of all species threatened with extinction. Successful continuation of ESA requires that the key protective provisions of the Act be maintained or strengthened during reauthorization. Four of these key provisions are:

Section 4 -- which calls for the listing of endangered and threatened species.

Section 6 -- which provides for cooperative state-federal management of endangered and threatened species.

Section 7 -- which prohibits federal agencies from jeopardizing endangered and threatened species and their habitat.

Section 9 -- which restricts the taking of endangered and threatened species.

NWF looks forward to working with Congress throughout the process of reauthorization of the Endangered Species Act. We hope that our comments at this hearing will provide information that proves useful in reauthorizing ESA.

II. SECTION 4

All Endangered and Threatened Species Must Be Listed

The Section 4 listing process is the initial critical link in the endangered species program. It is through this process that species in trouble are identified and listed. Once listed, they are brought under the protective umbrella of ESA, and are protected from illegal taking and from federal actions that would jeopardize their continued existence. The listing process and the manner in which species are selected for listing is complex and time consuming. But the process can work with adequate funding and agency support. Unfortunately, both of these ingredients are now missing.

Each year, the Office of Endangered Species (OES) of the U. S. Fish and Wildlife Service (FWS) prepares a "Program Advice Species List" (PASL), which is a compilation of species that are critically endangered, and for which the majority of the field work and data analysis have been completed. Species on the PASL are prime candidates for listing.

Since 1973, the number of species on the PASL has averaged 400 per year. However, only 288 threatened and endangered species are listed for the U.S., many fewer than the yearly average on the PASL. During the past 8 years, only 165 candidate species have been listed; an average of 21 per year.

In light of the above, the listing of species must be expedited to protect, at a minimum, the critically endangered species on the PASL.

Department of Interior Budget Cuts are Harming the Listing Program

Recently OES was ordered to reduce the number of species on its FY 81 PASL to reflect "more realistic numbers;" OES complied and cut the PASL to only 100 species. The reduction in species on the PASL was not biologically based. Rather it reflects the Department of Interior's (DOI) desire to cut the budget.

At the same time DOI announced a shift from species listing to species recovery. That shift of emphasis was reflected in the FY 82 DOI budget by a proposed 33% reduction ($4.5 million to $3.0 million) in funding for listing. Because of the "labor intensive" nature of the listing process that requires extensive travel, time-consuming field work, and detailed data analysis, this major budget cut drastically affected the listing process.

In spite of the announced shift from emphasis on listing to recovery, the DOI also proposed a massive 20% cut ($7.5 million to $6.0 million) in the funds to be used for recovery efforts. Even though the recovery program was proposed to receive twice the funding of the listing program, both are to receive crippling cuts. The announced shift in DOI emphasis certainly is not supported by their budget recommendations.

DOI Has Stopped Listing Species

The current administrators of DOI have not proposed any new listings. To the contrary they have taken action to delist or reclassify several species. To sidestep criticism in this area, they are attempting to take credit for the final listing of 44 species (mostly members of a genus of Hawaiian tree snails). Any such credit is unwarranted because all of these species technically were listed under the Carter Administration. Moreover, DOI delayed the final effective date of the listing for the Hawaiian tree snails for more than eight months while it conducted an economic review of the listing rules under E.O. 12291, Federal Regulation, issued by President Reagan.

The decision to list a species under Section 4 is supposed to be limited to biological factors. However, as noted above, since the issuance of E.O. 12291 by President Reagan, DOI has introduced economic factors into the listing process. The economic impact analysis required by E.O. 12291 has delayed and will delay listings and taxes the process because of the additional manpower and resources required to conduct the analysis. The use of the regulatory process as a way to introduce economic considerations into the listing process is illegal and has seriously and unnecessarily burdened the listing process.

"Lower Life Forms" Listings Should Continue

Recent proposals that listing priorities be based on taxonomic level offer perhaps the greatest threat to the integrity of the listing program and the Act. DOI is considering such an approach because of their budget cut proposals.

Similarly, others argue that only so-called "higher life forms" should be afforded protection. This argument is biologically and economically indefensible. The health of our ecosystem is dependent upon maintenance of the complex ecological relationships that exist among all species. The term "lower life form" implies that nearly three fourths of the world's species are unimportant or insignificant. Yet so-called "lower life forms" include endangered strains of wheat, corn, and rice that future plant breeders may need to produce new crops. At the recent Conference on Biological Diversity, Dr. William L. Brown, Chairman of Pioneer Hi-Bred International, spoke of the need to maintain existing genetic material of food stocks and pointed out that "about 15 species of cultivated plants literally stand between man and starvation." Other "lower life forms" include snails and mollusks that scientists have recently discovered do not contract cancer. This discovery could aid man in his fight against this disease. Comparatively few such species of plants and invertebrates have been subject to sufficient investigation to determine possible medical, agricultural, or industrial benefits to mankind. Thus, inadvertent or intentional actions that result in the extinction of any species may deprive mankind of many valuable products.

III. SECTION 6

A Strong State/Federal Partnership is Needed

Section 6 was enacted to encourage state and federal cooperation in the effort to conserve endangered and threatened species. This cooperation is made possible by three provisions of Section 6. First, federal agencies are required to consult with the states before they acquire land or water for endangered or threatened species. Second, federal agencies and states are allowed to engage in joint agreements for the management of areas established for protected species. And third, state agencies are permitted to assume important responsibilities for the conservation and management of endangered and threatened species through cooperative agreements. Congress invited the states to participate in the federal endangered and threatened species program by providing federal grant-in-aid matching funds for states with approved management programs.

Congress' reasons for inviting active state involvement in the endangered and threatened species program are apparent. For one, Congress was sensitive to the fact that ESA authorized federal agencies to become actively involved in the day-to-day management of endangered and threatened species, an area traditionally within the province of the states. Through the cooperative agreement provisions of Section 6, Congress intended to vest much of the responsibility for managing federally protected species in state officials. Furthermore, Congress wanted the valuable personnel resources and expertise of the state fish and game agencies to be utilized in its endangered species program. While the Fish and Wildlife Service has fewer than 200 law enforcement officers and only a few hundred biologists, the states have over 5,000 conservation officers and several thousand professional wildlife biologists. Finally, Congress recognized the need for a strong federal/state partnership because the habitat of most protected species is on state-owned or private property.

Thirty-nine (39) states have entered forty-nine (49) Cooperative Agreements (38 for wildlife, 11 for plants) under Section 6. (See Appendix 3 for a list of these states.) Each of these agreements contains provisions that are important to the management of endangered and threatened species. Most importantly, the agreement establishes a cooperative management program that, in part, (1) authorizes the states to carry out activities that benefit endangered and threatened species, (2) commits the FWS to provide financial assistance to acceptable state management and recovery projects, (3) authorizes state law enforcement officials to enforce federal and state laws intended to conserve endangered and threatened species, (4) provides that the state and federal agencies will cooperate in efforts to benefit listed species, (5) makes federal funding contingent upon the "adequacy and activeness" of the state program to conserve federally-listed species, and (6) encourages the exchange of biological and other pertinent data to facilitate critical habitat determinations. Furthermore, through the agreement, the states agree not to take or authorize the take of any federally-listed endangered or threatened wildlife.

Success of Section 6

Section 6 has been tremendously successful given the levels of funding that have been available. Thus far, approximately $24 million have been spent for state management efforts under Section 6. This is approximately 21% of the total annual appropriations level of funding for ESA for the fiscal years 1976 through 1981 (Appendix 4). The states have made good use of these funds by providing recovery efforts, research, surveys, law enforcement for 80 listed federal species and 173 state-listed or candidate species, public information/education programs, and land aquisition for endangered species.

The peregrine falcon, the bald eagle, the American alligator, the Key deer, the gray wolf, and many other species have benefited from the cooperative state-federal endangered species programs formerly supported by Section 6 funds. This same program has benefited many less well known species, such as the greenback trout, which was downlisted to threatened status as a result of a reintroduction program, and the bog turtle and Jefferson salamander, which were not listed when surveys supported by Section 6 found they were more abundant than previously thought.

Section 6 has done more than just benefit endangered and threatened species. Many plants and animals have benefited from ecosystems conserved primarily for species that are endangered or threatened. Recreational opportunities have been provided where compatible. An example of such opportunities is the wildlife management area acquired with Section 6 funds at Cape May, New Jersey. In addition to benefitting bald eagles and peregrine falcons, this 400 acre parcel of land supports a healthy ecosystem that attracts individuals who hunt, birdwatch, study nature, or just seek moments of freedom from urban settings.

Educational programs, funded through Section 6, have been conducted to inform the public of resident species in trouble, and the destructive impacts man has had on all life forms. Improvement in state law enforcement efforts benefit other wildlife besides listed species.

Future State Participation is Threatened

The elimination of Section 6 funds in FY 82 by the Congress and the Administration will seriously undercut the role of the states in wildlife management and represents a serious setback in the endangered species program.*/ The present cooperative agreements have resulted in numerous accomplishments cited above and have played a vital role in the conservation of endangered and threatened species, which would not have been possible without federal funding. Many states may now be forced to give up their endangered species programs.

Greater State Role Under Section 6

Congress should restore funds for Section 6 in order to maintain continuity of existing cooperative agreements and to support an effective ESA. The suddenness by which the states lost their funding has weakened confidence in the program and has called into question Congress' desire to see that the states play a management role. These problems can be offset by the restoration of funding for Section 6 and a guarantee that a minimum of 20 percent of the annual funds appropriated under ESA would be designated for the states. Additionally, the cost-sharing formula of Section 6 should be changed to one fourth state, three-fourths federal.

Currently FWS unilaterally establishes priorities for state programs under Section 6. Because Congress intended that Section 6 activities be cooperative, the states should have greater say in the establishment of priorities for state programs.

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*/ The zero-budgeting of Section 6 by the Administration contradicts their clear and often-stated position of a greater role for the states. Increased state participation is precisely what Congress intended when it crafted Section 6.

IV. Section 7

Section 7 Works

Section 7 is the cornerstone of ESA. It provides the mechanism that permits development to proceed while simultaneously protecting endangered species. The loss of a strong consultation process would eliminate this dynamic component, essentially cripple the Act, and result in confrontations that would be harmful to development and endangered species alike. The public supports a strong endangered species program and will not allow retreat on Section 7.

Section 7 has worked. It has protected endangered and threatened species while not unduly encumbering development through prolonged and extended consultations or by blocking federal projects.

The consultation process has not been used to block federal actions that would adversely impact a listed species, but instead it has served to provide a forum in which prudent and reasonable alternatives have been developed to permit the completion of a project while protecting endangered species.

In recent weeks, NWF staff completed a comprehensive review of the FWS's Section 7 files. The picture that emerged from our work and the findings presented below demonstrate that Section 7 is working.

Section 7 Is Not Delaying Projects

Section 7 requires that FWS issue an opinion within 90 days (3 months) after initiation of formal consultation. A complaint frequently aired is that consultation agencies are not complying with this time restriction. That is clearly not the case. We examined the more than 600 opinions issued between 1979 and 1981 by FWS to determine the average consultation time per opinion (Appendix 5, Table 1). The results of this analysis show that FWS was well within the 90-day limit with an average of 78 days (2.6 months) per opinion. The preparation of some opinions did exceed the 3-month period, but this was infrequent and usually occured where extensions had been mutually agreed to by FWS and the action agency. Thus, FWS records demonstrate that consultation has not delayed federal projects. Calls to amend Section 7 because a few projects have been delayed should be viewed with skepticism.

Even the agencies involved in the consultation process agree that it is working smoothly as indicated by the following:

> "We believe that there have been few instances in Region 6 where projects have been delayed solely

> because of the ESA. In most cases there have been other problems that would have delayed the project even if the ESA did not exist."
>
> Director, FWS Region 6
> November 13, 1981

> "We have not witnessed any attempts to circumvent the Section 7 consultation process. The approximate [sic] 30 federal agencies we deal with have all responded to the need to consult when required. To our knowledge we have not delayed any consultee's action. On the contrary, we have been complimented by at least the National Park Service and Forest Service on our ability to expedite consultations to accommodate their sometimes tight schedules."
>
> Director, FWS Region 2
> November 9, 1981

> "There have been no conflict cases in Region 7, nor, to our knowledge, have any projects been delayed as a result of Section 7 consultation."
>
> Director, FWS Region 7
> November 17, 1981

Agency Cooperation and Experience Have Made the Consultation Process More Efficient Than Congress Required

Interagency cooperation has substantially increased the efficiency of the consultation process and has reduced the number of conflicts. The agencies, working within the procedural framework of Section 7, have increasingly relied on informal consultation. Through that informal process, project changes are suggested and made that result in a "no-effect" determination. Thus, formal consultation is avoided. Examination of the recent trends in the number of informal and formal consultations conducted by FWS (Appendix 5, Table 2) demonstrates this point. As the number of informal consultations has increased, formal consultations and jeopardy opinions have correspondingly decreased (Appendix 5, Figure 1).

These data demonstrate that an increasing number of conflicts are being resolved during informal consultation, well before formal consultation would have to be initiated. As more agencies realize that most problems can be resolved during preliminary informal discussions, the trend of fewer formal consultations can be expected to continue. This may also be a sign that agency opposition to the endangered species program is decreasing.

The decline in the number of jeopardy opinions that paralleled the drop in formal consultations between 1979 and 1981 demonstrates the importance of informal consultation. Section 7 works. Furthermore, it will become increasingly efficient as more agencies decide to initiate consultation during the early stages of a project. The agencies agree on this point:

> "The fact that there are so few irresolvable conflicts _is_ a demonstration of the overall success of the consultation process. Early informal consultation may result in project changes. These changes may result in a no-effect to endangered and threatened species from the project and thus not require formal consultation."
>
> Director, FWS Region 6
> September 8, 1981

> "In fact, we have had great success in avoiding potential endangered species conflicts without necessitating formal consultation. Ninety percent

> of potential endangered species conflicts in Region 7 are resolved through informal consultation proceedings."
>
> Director, FWS Region 7
> October 16, 1981

Section 7 Is Not A Project Stopper

The fear that Section 7 would become a major source of frustration for developers has proven groundless. In other words, Section 7 is not a "project stopper." A review of the 154 agency projects receiving jeopardy opinions between 1979 and 1981 shows that Section 7 has rarely been responsible for the withdrawal or cancellation of a project. Even the most controversial projects--Tellico Dam, the Beaufort Sea OCS oil and gas leases, Cheyenne Water Project, and Grayrocks Dam--have either been constructed or allowed to proceed. To date the consultation process has provided the channel through which even the most difficult conflicts have been resolved. Section 7 might well be considered the "living" part of the Act.

The large number of jeopardy cases that have been successfully resolved through formal consultation demonstrates that Section 7 is working and that consultation has not blocked federal projects, even those that would have jeopardized an endangered species.

The agencies agree, as evidenced by these comments from FWS files:

> "Every jeopardy biological opinion we have issued to date (over 20 of them), has included reasonable and prudent alternatives that would still allow a

> project to proceed. Thus, we have not stopped a single project. Even the Grayrock Dam Project had reasonable and prudent alternatives but the Basin Electric Power Cooperative requested the Corps of Engineers to go the exemption route rather than accept the alternatives."
>
> Director, FWS Region 6
> September 8, 1981

> "There have been no irresolvable conflicts. Those projects that appeared to be the least compatible with listed species were not begun for reasons other than endangered species."
>
> Director, FWS Region 1
> November 25, 1981

Section 7 Protects "High Profile" Species

NWF examined the jeopardy opinions on file at the Office of Endangered Species that were issued between 1979 and 1981 to determine which species have been most frequently been the subject of jeopardy opinions. The results (Appendix 5, Table 3) show that this nation's symbol, the American bald eagle, was the species most frequently involved in jeopardy opinions. Another "high profile species," the peregrine falcon followed the bald eagle. When viewed by taxa (Appendix 5, Table 4) birds were involved in the greatest number of jeopardy opinions (33%), followed by mammals (19%), and then plants (16%).

Any belief that only "insignificant" species interfere with federal projects is clearly off-base.

Section 7 Also Benefits Nonendangered Species

In addition to its success in balancing development with the protection of threatened and endangered species, Section 7 has provided several other benefits. In many instances, agencies consulting on a project have established precedents by adopting guidelines and model programs for their use in future Section 7 work. Although these benefits were unanticipated, they nonetheless bear further testament to the value of the consultation process.

Some specific examples of these secondary benefits that have been cited by FWS Regional Offices are discussed below:

1) Based on information gained through various consultations, the Region 4 Office has also produced a set of State Survey Guidelines that the Office now uses as a data base for decisions under Section 7 regarding endangered species.

2) Important management information regarding endangered species is often uncovered during surveys conducted in compliance with the Endangered Species Act. For example, in Nebraska during a spring and fall consultation survey a large bald eagle concentration was found on the Niobrara River.

3) Consultation on the Beaufort Sea oil and gas lease sale resulted in the development of standard stipulations for oil and gas leases designed for the protection of endangered and threatened species.

4) An informal and then formal consultation with the Bureau of Indian Affairs (BIA) on the Flathead Reservation resulted in a two-year research program funded by BIA and the development of a grizzly bear management plan on the Kootenai-Salish Tribal Council reservation. The development of the Interagency Guidelines for Management of Grizzly Bears in the Greater Yellowstone Ecosystem were largely developed to assist managers in designing and evaluating projects to benefit or minimize impact on grizzly bears and facilitate the consultation process.

5) The transmission line construction guidelines issued by the Rural Electrification Administration were largely the result of consultations and interaction with FWS.

DOI Is Weakening Section 7 Administratively

Two recently issued DOI Solicitor's opinions have seriously weakened Section 7. Both opinions reverse earlier more protective opinions.

In the first, issued August 27, 1981, it was determined that the cumulative impact of "other" federal projects that have not been reviewed under Section 7, are not to be considered when analyzing the impact of the federal project at issue. This novel approach to cumulative impact analysis is rationalized by a "first-in-time", "first-in-right" mentality. In other words, each federal project is alloted a share of the responsibility for a species' extinction, so long as it is not the last in line and the project that pushes the species over the brink into extinction. Somehow this seems inconsistent with Congress' objective that endangered and threatened species should be restored to healthy populations. 16 U.S.C. § 1531(b).

Four days later (August 31, 1981), the second opinion was issued. It determined that Section 7 does not apply to federal actions in foreign countries. This is quite surprising in light of Congress' strong commitment under ESA to international conservation of endangered species and Congress' strong desire that all endangered and threatened species be protected as opposed to just those in the United States.

V. Problems Implementing Section 7

Although Section 7 is largely satisifying the requirements of the Act, there are several problems with its implementation that we discuss below:

Problem: Agencies Do Not Always Give Proper Weight to Biological Opinions

The Act does not clearly define the deference that is due biological opinions issued by the wildlife agencies. At times agencies receiving a jeopardy opinion have ignored the opinion and proceeded with their project or action. The only recourse available to protect a species in these situations is for a private individual or organization to intervene by initiating legal action. Although the threat of lawsuits may have deterred agencies from ignoring jeopardy opinions thus far, we believe this is inadequate insurance to protect against such an event ever occurring.

Problem: Biological Opinions Do Not Document No-Jeopardy Findings

The majority of biological opinions issued by FWS have found "no effect." These opinions provide no documentation. Greater consistency in consultation would result if the wildlife agencies were required to document why a project is "not likely to jeopardize."

Problem: The Responsibility for Initiating Consultation Is Not Clear

Section 7 requires that an action agency conduct its own biological assessment. These assessments provide the basis for deciding whether formal consultation must be initiated. If the project is likely to affect a listed species consultation must be initiated. On numerous occasions FWS has discovered that action agencies have overlooked species that may have been affected. Moreover, many action agencies do not have the expertise to make the "affect" determinations. Others just don't. Uncertainty in this critical step threatens the consultation process.

Problem: Application Of Section 7(d) Where There Is Inadequate Information

The purpose of the consultation process is to provide sufficient biological information to enable the "action agency" to determine whether its proposed activity is likely to jeopardize the continued existence of protected species or harm or destroy their habitat. The biological opinion required by Section 7(b) is the tool through which the consulting agency (wildlife agency) provides the action agency with the biological information that is necessary to guarantee compliance with ESA and suggested reasonable alternatives to avoid species jeopardy. Once formal consultation is begun, the consultation process is not complete until the wildlife agency issues the biological opinion. Formal consultation must be initiated if an agency action will affect an endangered or threatened species.

Section 7(d) was enacted in 1978 in the aftermath of Tellico Dam. It prohibits action agencies from making irreversible or irretrievable commitments of resources that would foreclose implementation of any reasonable and prudent alternative until the consultation process is completed; that is, until the biological opinion is issued. The purpose of Section 7(d) is to protect the integrity of the consultation process by prohibiting premature investments in a proposed action that would make it a *fait accompli* before consultation was completed.

The problem arises when there is insufficient information available to complete consultation within the statutory 90 day time frame. The present approach is to simply proceed with investments, regardless of their size or "irreversibility", while leisurely proceeding togather the necessary information to complete consultation. This approach invites future Tellico Dams and needs to be changed.

VI. OTHER

Section 10

Section 10(e) of ESA allows Alaskan natives to take endangered species if "primarily for subsistence purposes." While legitimate subsistence needs are an important consideration, they should never be elevated over the ultimate survival of a species.

Our specific concern in this regard is the taking of the critically endangered bowhead whale by natives during annual hunts off the north coast of Alaska. The Scientific Committee of the International Whaling Commission has recommended a zero take quota for the bowhead for years. Moreover, overwhelming scientific evidence demonstrates that the bowheads cannot sustain any take; not a single whale. The bowhead has also been listed as depleted under the Marine Mammal Protection Act. In short, the bowhead is critically endangered and yet the hunt goes on. Congress should again address the subsistence exemption as it applies to critically endangered species.

DOI Press Release Regarding Public Comments on ESA Is Misleading

On November 10, 1981, the Department of the Interior issued a press release that referenced to comments it had received in response to its September 18, 1981 Federal Register notice that requested public comment on reauthorization of the ESA. Statements in the press release are misleading. It implies that 400 comments were received in response to the Federal Register notice. However, only 53 (15%) of these comments came as a result of the notice. The vast majority of comments were submitted by Regional Offices of FWS and the White House transition team. Regardless of this inaccuracy, a summary of the comments responding to the Federal Register notice (Appendix 6) is enlightening. Of the 53 comments, 12 (23%) favored a stronger Act, 18 (34%) supported the Act as is, 15 (28%) proposed technical changes that would still afford the level of protection currently provided, and only 2 (4%) favored an Act providing less protection to the resource.

VII. CONCLUSION

Our comments on the implementation of ESA and our suggested changes should leave no doubt that it is imperative to have a strong Act that protects all species. We caution those, including present Administration, who may attempt to weaken the key provisions of the Act. Efforts to reduce the protection provided by Sections 4, 6, 7, and 9 are contrary to the goals of ESA and to the will of the people, and thus may be expected to produce a prolonged and bitter struggle. Such a struggle is not in the public interest or in the interest of our resources and must be avoided. To this end, NWF stands prepared to work cnstructively with this Subcommittee and other organizations to achieve reauthorization of a strong and effective ESA.

APPENDIX I

NATIONAL WILDLIFE FEDERATION
22nd Annual Meeting, St. Louis, Missouri, Feb. 28-March 1 and 2, 1958

Resolution No. 19

THE ENDANGERED HAWAIIAN GOOSE

WHEREAS, the Hawaiian Goose (Branta Sandwicense) a native bird existing only in the Hawaiian Islands, a territory of the United States, is the rarest species of waterfowl in the world today; and

WHEREAS, this unique fowl, with less than fifty known birds presently remaining in the wild state, is in danger of extinction; and

WHEREAS, it is imperative that a concerted effort be made to save and re-establish this species; and

WHEREAS, the National Wildlife Federation is dedicated to a firm policy of saving from extermination every beneficial form of wildlife;

NOW THEREFORE BE IT RESOLVED that the National Wildlife Federation shall lend its full support to the effort and program designed to save and perpetuate this unique and valuable species, and especially urge congressional enactment of a proposed appropriation to be devoted to such purpose.

NATIONAL WILDLIFE FEDERATION
29th Annual Convention, Washington, D.C., March 5-7, 1965

Resolution No. 3

PRESERVATION OF ENDANGERED SPECIES

WHEREAS, changes in their environments threaten the survival of several species of birds, mammals, fish, and other forms of wildlife; and,

WHEREAS, through the management of lands, waters, forests, and other resources, and by the use of chemicals and discharges of wastes which pollute, man is responsible for many of these environmental changes which adversely affect living things; and,

WHEREAS, the National Wildlife Federation long has exerted a leadership for the preservation of wildlife creatures faced with the danger of extinction; "Save Endangered Wildlife" having been the theme of the 1956 National Wildlife Week observance; now,

THEREFORE BE IT RESOLVED that the National Wildlife Federation, in annual convention assembled March 7, 1965, in Washington, D.C., hereby expresses its urgent and continuing concern about forms of fish and wildlife and other creatures threatened with extinction and recommends implementation of the following principles:

1. That adequate appropriations be granted from the Land and Water Conservation Fund for the acquisition of suitable national areas which will preserve endangered species of migratory birds, mammals, fish, and other creatures determined to be responsibilities of the Federal Government;
2. That adequate State funds be allocated for the preservation of non-migratory fish and wildlife which are threatened with extinction. Measures taken to preserve non-migratory, non-game species of endangered fish and wildlife and other creatures should be responsibilities of the general public and, to a large extent, funded from tax revenues.

Resolution No. 46

WHOOPING CRANES AND ENDANGERED WILDLIFE RESEARCH STATION

WHEREAS, the Rare and Endangered Species Act is a valuable and desirable law; and

WHEREAS, the Bureau of Sport Fisheries and Wildlife, U.S. Department of the Interior, is charged with its administration; and the Office of Endangered Species has done an exceptional job of implementing the Rare and Endangered Species Act; and

WHEREAS, the Patuxent Wildlife Research Center, operated by the Bureau of Sport Fisheries and Wildlife, employs competent, educated, and trained biologists and technicians to carry out the scientific research and propagation of threatened wildlife species; and

WHEREAS, the current program of the Center for propagation, restoration and preservation of the Whooping Crane has been an unparalleled success; and

WHEREAS, this program has not appeared to disturb the wild population of Whooping Cranes; and

WHEREAS, the Whooping Cranes usually lays two eggs in a clutch but normally raises only one chick; and

WHEREAS, the Research Center's policy of taking only one egg from a clutch has not adversely affected the wild population's yearly production or continued growth; and

WHEREAS, staff personnel on the project have taken special pains to prudently carry out studies with closely related races of sandhill crane to develop techniques of egg-taking, transporting, incubating, rearing and breeding so that these methods can be safely employed and effectively with the extremely rare Whooping Crane; and

WHEREAS, this program has increased the captive flock of Whooping Cranes at the Wildlife Research Center to a total of 17 birds;

NOW, THEREFORE, BE IT RESOLVED that the National Wildlife Federation, in annual convention assembled in Chicago, Ill., March 20-22, 1970, hereby commends personnel of the Endangered Wildlife Research Station for their outstanding efforts and recommended that they continue the egg-taking and propagation program for the Whooping Crane for as long as their demonstrated ability and professional judgment dictates.

NATIONAL WILDLIFE FEDERATION
36th Annual Convention, Mexico City, Mexico, March 9-12, 1972

Resolution No. 6

CONTROL OF TRADE IN ENDANGERED PLANTS AND ANIMALS

WHEREAS, commercialized world trade is one of the most serious causes of depletion of many wild species of wild plants and animals; and

WHEREAS, the world trade in wild creatures and plants or their products frequently fails to consider their conservation; and

WHEREAS, many of the species involved in world trade are on official lists of endangered species; and

WHEREAS, the International Union for the Conservation of Nature and Natural Resources, in its continuing efforts to regulate international trade of wild plants and animals and their products, has developed a draft international treaty which would control operations relating to endangered wildlife and plants; and

WHEREAS, the U.S. Government has consented to host an international pleni-potentiary conference in Washington, D.C., in April, 1972, for the purpose of negotiating a widely-acceptable international agreement, with the IUCN draft treaty as a beginning;

NOW, THEREFORE, BE IT RESOLVED that the National Wildlife Federation, in annual convention assembled March 10-12, 1972, in Mexico City, Mexico, hereby endorses the concept of an international treaty for the control of trade in endangered wildlife and plants, and urges the Secretary of State to use the influence of his office in the pursuance of an effective international treaty to which the U.S. would become signatory.

Resolution No. [illegible]

ENDANGERED WILDLIFE

WHEREAS, many species of fish and wildlife are endangered and/or threatened with extinction; and

WHEREAS, species which are endangered or threatened with endangerment should be given suitable protection and management under sound recovery plans; and

WHEREAS, cooperative joint Federal-State efforts are needed to ensure the most effective effort to manage endangered species of fish and wildlife;

NOW, THEREFORE, BE IT RESOLVED that the National Wildlife Federation, in annual meeting assembled March 15-18, 1973, in Washington, D.C., hereby urges the adoption of these principles:

1. That agencies of the Federal Government be authorized and required to cooperate fully with state wildlife agencies in any program to manage endangered species, particularly those of a resident or non-migratory type;

2. That the state agencies be given an approriate opportunity to prepare and manage recovery plans, and retain jurisdiction over on resident species, but, if they do not respond, that Federal agencies be authorized to develop suitable plans and assume jurisdiction;

3. That the States continue to exercise the prime responsibility for managing native species, including those which are endangered or threatened with endangerment;

4. That the Federal Government cost-share expenses for the establishment of approved State recovery progroms; and

5. That all agencies of the Federal Government be required to work to the closest degree possible with state wildlife agencies in the development of lists of endangered and threatened domestic species.

Resolution No. 16

NATIVE RIGHTS AND FISH AND WILDLIFE

WHEREAS, the National Wildlife Federation continues to be dedicated to the principles of sound, scientific wildlife management; and

WHEREAS, the scientific management of fish and wildlife is in jeopardy because of special privileges granted to the Indian people through judicial interpretation of treaties, making it difficult to regulate the taking of fish and wildlife; and

WHEREAS, the States have the authority to enact laws and promulgate rules and regulations concerning the amounts, times, and manners of taking surplus resident fish and wildlife outside Indian reservations;

NOW, THEREFORE, BE IT RESOLVED that the National Wildlife Federation, in annual meeting assembled March 16-19, 1978, in Phoenix, Ariz., hereby expresses its support of the following principles relating to native rights and claims upon fish and wildlife resources:

—Indian tribes should have the right to regulate their members to on-reservation hunting and fishing for resident species and to control access to Indian lands within the exterior boundaries of reservations by non-Indians, including the establishment of fees for the privilege of using Indian lands for hunting and fishing by non-members. However, non-Indians hunting and fishing on Indian lands shall be subject to all laws and regulations of the State in which the reservations are located.

—Indians should have no preferential rights or privileges on fish and wildlife resources outside the actual boundaries of their reservations;

Because apportionments of surplus fish and wildlife resources are difficult to determine and counterproductive to sound management, all taking must be terminated when surpluses are exhausted;

--Fish and wildlife which migrate on and off or through reservations should be harvested in accordance with State or Federal regulations, the purpose of which may include preserving numbers of the migratory species which the State agency deems appropriate to accommodate an equitable off-reservation harvest; the protection of adequate brood stocks to insure a continuing optimum sustainable yield must be given primary consideration by all governmental authorities and user interest groups.

--Indian ceremonial and subsistence rights on reservations should not result in losses of endangered species of wildlife and/or the brood stocks of any species which may fall below the optimum sustainable yield level;

--After consultation with the Indians, the Department of the Interior and State wildlife agencies should identify the types of management assistance which can be made available to enhance fish and wildlife resources on Indian lands and to provide aids and options other than decimating wildlife populations when subsistence does not meet the individual families' nutritional needs, and the Congress should appropriate funds for federal assistance if the natives agree to share resources with other citizens.

--Congress should more specifically define "subsistence rights for Indians" in current treaties along the lines herein recommended to clarify and bring order out of the current chaotic conditions of court interpretations.

PROTECTION OF CRITICAL HABITAT INFORMATION

WHEREAS, all wildlife, including those species listed as endangered or threatened, are interesting and important members of natural ecosystems; and

WHEREAS, some rare species, particularly raptors, have economic value and occasionally enter into domestic and international trade despite laws prohibiting such activity; and

WHEREAS, even those individuals interested only in observing or photographing rare wildlife, by their presence and activities, may contribute to nest or den abandonment or destruction; and

WHEREAS, such activities often are encouraged by publication of specific locations of nest sites, den sites, roosts or other areas within critical habitats in scientific journals, environmental impact statements, planning documents, critical habitat proposals, or by recording in government files where such information is readily available to the public; and

WHEREAS, publication or availability of such specific information may not be in the best interests of the species concerned and generally is not required for the purpose of the publication and/or proposal;

NOW, THEREFORE, BE IT RESOLVED that the National Wildlife Federation, in annual meeting assembled March 22-25, 1979, in Toronto, Ontario, strongly urges that such specific site location information not be published in documents readily available to the public or those interested in exploitation for economic profit.

Resolution No. 18

INTERNATIONAL WILDLIFE MATTERS

WHEREAS, wildlife and other international resources have increasingly become the subject of world conservation and political concern; and

WHEREAS, the parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora are presently meeting to consider the protection, and import and export regulations for certain U.S. species such as the bobcat, lynx, river otter, and American alligator; and

WHEREAS, a meeting will soon be convened in West Germany to ratify a worldwide convention for the protection of migratory species, many of which will be endangered or threatened, and some of which will be native to the U.S.; and

WHEREAS, negotiations are continuing toward the conclusion of international treaties affecting the natural resources of the seas and the Antarctic continent; and

WHEREAS, animal protection groups involved in the negotiations of international agreements will base their recommendations on emotions rather than biological fact or necessity, as evidenced by the recent determination of the Royal Society for the Prevention of Cruelty to Animals that sport fishing as well as hunting should be banned, and the recent distribution of a charter on animal rights erroneously represented to have been adopted by the United Nations Educational, Scientific and Cultural Organization (UNESCO);

NOW, THEREFORE, BE IT RESOLVED that the National Wildlife Federation, in annual meeting assembled March 22-25 in Toronto, Ontario, consider these international actions as serious threats to the recreational harvest of fish and wildlife in the country and that they become more involved in international activities affecting wildlife; and

BE IT FURTHER RESOLVED that the National Wildlife Federation try to enlighten U.S. and foreign delegations to these conventions that the real plight of wildlife is the disappearance of world ecosystems, especially tropical rain forests, and that prohibitions against the consumptive use of wildlife only divert attention from the real threat to wildlife today.

Resolution No. 39

RELATIVE TO THE REINTRODUCTION OF ANIMALS AND PLANTS

WHEREAS, many animals and plants are listed as endangered and threatened under the federal Endangered Species Act; and

WHEREAS, reintroduction within historic ranges may be a feasible and desirable management option designed to conserve these species; and

WHEREAS, acceptance of such reintroductions by states, organizations, and individuals needs to be widened;

NOW, THEREFORE, BE IT RESOLVED that the National Wildlife Federation, in annual meeting assembled March 22-25, 1979, in Toronto, Ontario, does hereby recommend that the U.S. Fish and Wildlife Service explore the legal basis for, and the possible rapid implementation of, a policy to declare such reintroduced populations as experimental and as unlisted under the Act, and as exempt from designations of critical habitat, unless and until such reintroductions are self-sustaining, except that prohibitions and penalties against unauthorized possession, taking, and related actions shall still apply.

Resolution No. 40

ENDANGERED SPECIES

WHEREAS, in the haste to conclude a treaty for the control of trade in endangered wildlife and plants, certain species and larger taxa were included which are not actually endangered; and

WHEREAS, the U. S. delegation at the meeting of parties of the Convention on International Trade in Endangered Species of Wild Fauna and Flora now in progress in Costa Rica is attempting to correct these past mistakes; and

WHEREAS, an effort is being made by some organization opposed to responsible wildlife management to thwart the U. S. efforts; and

WHEREAS, it is our firm conviction that use of the Endangered Species Convention to prevent all use of wildlife resources will result in loss of public confidence in the Endangered Species Treaty;

NOW, THEREFORE, BE IT RESOLVED that the National Wildlife Federation, in annual meeting assembled March 22-25, 1979, in Toronto, Ontario, fully supports the adopted U. S. position and vigorously opposes any effort to misuse the International Convention; and urges President Carter and Secretary Andrus to confirm the position of the U. S. delegation at the negotiating meeting in Costa Rica.

National Wildlife Federation
1412 16TH ST., N.W., WASHINGTON, D.C. 20036
202—797-6800

Resolution No. 42

SEA OTTER PLAN

WHEREAS, the southern sea otter (Enhydra lutris) is listed as "threatened" by the U. S. Department of the Interior; and

WHEREAS, the major part of the sea otter population in California lives between Monterey Bay and Morro Bay; and

WHEREAS, there are two oil tanker ports at either extreme of this part of the sea otter's range; and

WHEREAS, sea otters are extremely susceptible to damage and death from oil;

NOW, THEREFORE, BE IT RESOLVED that the National Wildlife Federation, in annual meeting assembled March 20-23, 1980, in Miami Beach, Fla., hereby encourages the U. S. Fish and Wildlife Service, the California Department of Fish and Game, Friends of the Sea Otter, Pacific Gas and Electric Company, and the U. S. Coast Guard to develop a joint contingency plan to rescue sea otters and minimize damage to the species in the event of an oil spill off the California coast.

National Wildlife Federation

1412 16TH ST., N.W., WASHINGTON, D.C. 20036

202—797-6800

Resolution No. 43

CALIFORNIA CONDORS

WHEREAS, the California Condor (*Gymnogyps californianus*) is classified by the Fish and Wildlife Service as an endangered species; and

WHEREAS, all persons interested in the condor agree that the current status of condor population is perilous, with estimates of 20 to 30 adult birds and 4 to 8 juveniles among these numbers; and

WHEREAS, differences of opinion exist as to whether or not a captive breeding program should be undertaken; and

WHEREAS, every effort, to date, has failed to stop the population decline, and the chances for survival are not good;

NOW, THEREFORE, BE IT RESOLVED that the National Wildlife Federation, in annual meeting assembled March 20-23, 1980, in Miami Beach, Fla., hereby endorses a step-by-step captive breeding program of wild-caught condors, with every possible precaution to be taken; and

BE IT FURTHER RESOLVED that this organization endorse, in full, the Condor recovery effort as outlined in the California Condor Recovery Team's Contingency Plan.

NATIONAL WILDLIFE FEDERATIO
1412 Sixteenth Street, N.W., Washington, D.C. 20036 [illegible]

Resolution No. 15

MORATORIUM ON THE TAKING OF BOWHEAD WHALES BY ALASKA NATIVES

WHEREAS, the bowhead (Balaena mysticetus) is one of the most endangered great whales; and

WHEREAS, the data base presently available is insufficient to scientifically manage the species, with uncertainties remaining about [illegible] whale's average and maximum life expectancy, spatial and temporal distribution, natural mortality, natality, net recruitment, sex ratios, pregnancy rates, aging techniques, effects of natural environmental perturbations, and the minimal critical size of the Beaufort sea stock [illegible]

WHEREAS, the National Oceanic and Atmospheric Administration (NOAA) [illegible] stated that even in the absence of a harvest the population will still evidence a long-term decline; and

WHEREAS, the International Whaling Commission's Scientific Committee [illegible] unanimously recommended no take for the last two years, and the U. S. reservation has seriously weakened our credibility on International [illegible] Conservation issues; and

WHEREAS, the bowhead whale population has been determined to be [illegible] under the Marine Mammal Protection Act since November 1977; and

WHEREAS, the federal government continues to allow the yearly take [illegible] bowhead whales by natives of Alaska; and

WHEREAS, the natives lose more than one whale for each one [illegible] landed;

NOW, THEREFORE, BE IT RESOLVED that the National Wildlife [illegible] annual meeting assembled March 26-29, 1981, in Norfolk, Virginia, [illegible] for a moratorium on the taking of bowhead whales by Alaskan [illegible] the results of studies which will provide adequate information [illegible] scientifically manage the species to ensure its perpetuation.

APPENDIX II

LEGISLATIVE BACKGROUND

The Endangered Species Act of 1973 ("ESA"), as amended, is the first comprehensive legislation enacted to conserve endangered and threatened species and their habitat. However, development of the current ESA programs to conserve endangered and threatened species can be traced back to 1966.

The first legislation enacted specifically to protect endangered species was the Endangered Species Preservation Act of 1966 (Pub. L. No. 89-669). The 1966 Act contained four important provisions. First, it directed the Secretary of the Interior to "carry out a program in the United States of conserving, protecting, restoring and propagating selected species of native fish and wildlife." Second, it authorized the acquisition of endangered species habitat for inclusion in the National Wildlife Refuge system using funds up to $15 million from the Land and Water Conservation Fund, provided that no more than $750,000 be spent on any one area. Third, it required the preparation of an official list of endangered species. Fourth, it declared that the Departments of Interior, Agriculture and Defense shall seek to protect species of native fish and wildlife threatened with extinction and shall preserve their habitat on lands under their jurisdiction if it is practicable and consistent with the primary purposes of the Departments' agencies.

Although the 1966 Act was an important step towards conserving endangered species, it had serious drawbacks including its failure to prohibit the taking of endangered species. The habitat protection provisions of the 1966 Act were of little consequence because the agencies were only directed to protect habitat "insofar as practicable and consistent with the primary purposes" of the agencies, and because of the limited acquisition authority given the Secretary of the Interior. Furthermore, the 1966 Act applied only to native wildlife as opposed to foreign wildlife.

The Endangered Species Conservation Act of 1969 (Pub. L. No. 91-135) strengthened several of the weaknesses of the 1966 Act. The 1969 Act expanded the Secretary's habitat acquisition authority by increasing the maximum amount that could be spent on any one area to $2.5 million from the $750,000 limit of the 1966 Act. It also redefined fish and wildlife to include "any wild mammal, fish, wild bird, amphibian, reptile, mollusk, or crustacean." The 1966 Act had been limited to vertebrate animals. But the international aspects of the 1969 Act were the most noticeable improvement. It authorized the publication of a list of species or subspecies of fish and wildlife threatened with "world-wide" extinction and prohibited their importation into the United States.

Even with the 1966 and 1969 Acts, the endangered species program was far from adequate. There still were no prohibitions on the taking of endangered species, and the habitat protection provisions were limited to only a few agencies and then only if they were practicable and consistent with the primary purposes of those agencies.

In 1973 Congress again turned its attention to endangered species. That year it enacted the comprehensive Endangered Species Act of 1973 to correct the shortcomings of its previous legislative efforts. The 1973 Act embraced "any member of the animal kingdom" within its protective reach, and for the first time authorized the listing and conservation of plants. It also established the threatened species category in addition to endangered species, thereby affording protection to species before they become endangered. The 1973 Act also included several provisions to protect endangered species and their habitat. It provided for the designation of critical habitat for endangered and threatened species to protect that essential habitat, and eliminated all restrictions on the expenditure of money from the Land and Water Conservation Fund. Significantly, the 1973 Act, for the first time, prohibited the taking of endangered species. Section 7 of the 1973 Act imposed strict but necessary requirements on all federal agencies to protect endangered and threatened species and their habitat. First, each agency must utilize their programs to further the purposes of the Act and to carry out conservation requirements; and second, each agency must ensure that its activites do not jeopardize the continued existence of endangered or threatened species or destroy or modify critical habitat.

Since its enactment in 1973 the Endangered Species Act has remained intact with only one major amendment in 1978. That year Congress amended the Endangered Species Act of 1973 to establish an Endangered Species Interagency Committee to review federal agency actions that would jeopardize the continued existence of a threatened or endangered species to determine whether these actions should be exempted from the requirements of Section 7 of the 1973 Act. At the same time, Congress also amended the 1973 Act to require the designation of critical habitat as part of the listing process. Section 7 prohibits such actions if they would jeopardize the continued existence of an endangered or threatened species or destroy critical habitat.

In 1979 Congress again amended several sections of the 1973 Act in large part to bring them into conformance with agency practice and judicial decisions. None of the amendments significantly changed the substantive provisions of the 1973 Act.

The long and painstaking development of the federal endangered and threatened species program clearly demonstrates a commitment to the conservation of these species and their habitat. This commitment should not be overlooked as we consider reauthorization of the Endangered Species Act.

APPENDIX III

States with cooperative agreements	Personnel lost due to Section 6 cut	
	State agency	Contract
Alaska	0	1
Arkansas	2	5
California	18	28
Colorado	21	0
Delaware	0	0
Florida	22	0
Georgia	5	10
Guam	1	0
Idaho	1	3
Illinois	0	0
Iowa	0	0
Kansas	0	0
Maine	0	0
Maryland	0	0
Massachusetts	0	0
Michigan	2	0
Minnesota	1	0
Missouri	1	0
Montana	2	0
Nebraska	0	0
Nevada	0	2
New Hampshire	0	0
New Jersey	2	0
New Mexico	0	0
New York	8	0
North Carolina	5	18
Ohio	0	0
Pennsylvania	0	0
Rhode Island	2	0
South Carolina	5	0
South Dakota	1	0
Tennessee	8	4
Utah	0	0
Virginia	0	0
Virgin Islands	4	0
Washington	4	7
Wisconsin	2	0
Wyoming	4	0
TOTALS	121	78
GRAND TOTAL	199	

APPENDIX IV

	Total funds appropriated ESA 1974 - 1981	Grant Funds appropriated Section 6	Section 6 grant funds allocated
1974	4,660,000	- 0 -	- 0 -
1975	5,606,000	- 0 -	- 0 -
1976	11,223,000	2,000,000	*
1977	13,330,000	4,000,000	1,568,400
1978	16,534,000	4,000,000	5,717,900**
1979	18,869,000	3,000,000	5,862,400**
1980	21,725,000	5,000,000	5,021,400**
1981	24,895,000	4,000,000	5,445,400**

* Due to the small amount allocated in 1976, 1976 and 1977 allocations combined.

** These figures represent inclusion of previous year's unspent funding carried over and reallocated.

APPENDIX V

TABLE 1

Average Consultation Time on All Opinions: 1979-1981

	Total Time (Mo.)			Total No. Opinions		
	Jeopardy	Non-Jeopardy	Total	Jeopardy	Non-Jeopardy	Total
1979	155	541	696	48	223	271
1980	157	568	725	49	222	271
1981	32	162	194	11	68	79
		Total	1,615		Total	621

Average Time: 2.6 Mo./Opinion

Table 2

SECTION 7 CONSULTATION TOTALS: SUMMARY

Totals for all Regions, including the Washington Office:

FY	Informals	Formals	Jeopardy Opinions
1979	1585	968	70 (+20* no jeo., if recom. accepted)
1980	2374	707	55
1981	3535	504	29
Totals:	7,494	2,179	154 (+20*)

a. Regional totals:

Region	FY	Informal	Formal	No Jeopardy	Jeopardy
1	1979	101	149	76	28
	1980	506	96	70	15
	1981	1008	86	53	8
2	1979	327	84	83	1
	1980	400	45	42	3
	1981	385	41	39	2
3	1979	378	63	55	4
	1980	175	34	32	2
	1981	230	22	20	1
4	1979	325	61	62	6
	1980	672	58	57	5
	1981	640	14	13	1
5	1979	117	4	1	2
	1980	152	4	1	0
	1981	461	3	5	0
6	1979	322	74	59	8
	1980	401	79	63	17
	1981	762	41	36	1
7	1979	15	5	3	2
	1980	68	4	3	1
	1981	49	3	1	2

b. Washington Office totals:

FY	Formals			Jeopardy Opinions		
	IntraServ	InterAg	Permits*	IntraServ	InterAg	Permits
1979	179	16	333 = 528	6	2	11 = 19
1980	163	12	212 = 387	5	1	6 = 12
1981	71	16	207 = 294	0	6	8 = 14

(*permits - consultation with Wildlife Permit Office: ESA Section 10)

Table 3

Species for Which "Jeopardy" Was Found More Than Once: 1979-1981

SPECIES	NO. TIMES JEOPARDY FOUND	% OF TOTAL
Bald eagle	16	12.3
American peregrine falcon	10	7.7
CA least tern	8	6.2
CO squawfish	7	5.4
Lahontan cutthroat trout	7	5.4
grizzly bear	6	4.6
Cui-ui	5	4.6
FL manatee	5	4.6
Humpback chub	5	4.6
San Diego mesa mint	5	4.6
Black footed ferret	4	3.1
Blunt-nosed leopard lizard	4	3.1
Gray wolf	4	3.1
Red-cockaded woodpecker	4	3.1
San Joaquin kit fox	4	3.1
Whooping crane	4	3.1
Attwater's greater prairie chicken	3	2.3
HI coot	3	2.3
Higgin's eye pearly mussel	3	2.3
HI stilt	3	2.3
IN bat	3	2.3
Southern sea otter	3	2.3
Boneytail chub	2	1.5
Loggerhead sea turtle	2	1.5
Marianas mallard	2	1.5
Pink mucket pearly mussel	2	1.5
Red wolf	2	1.5
Utah prairie dog	2	1.5
Wright fishhook cactus	2	1.5
Total - 29	Total 130	

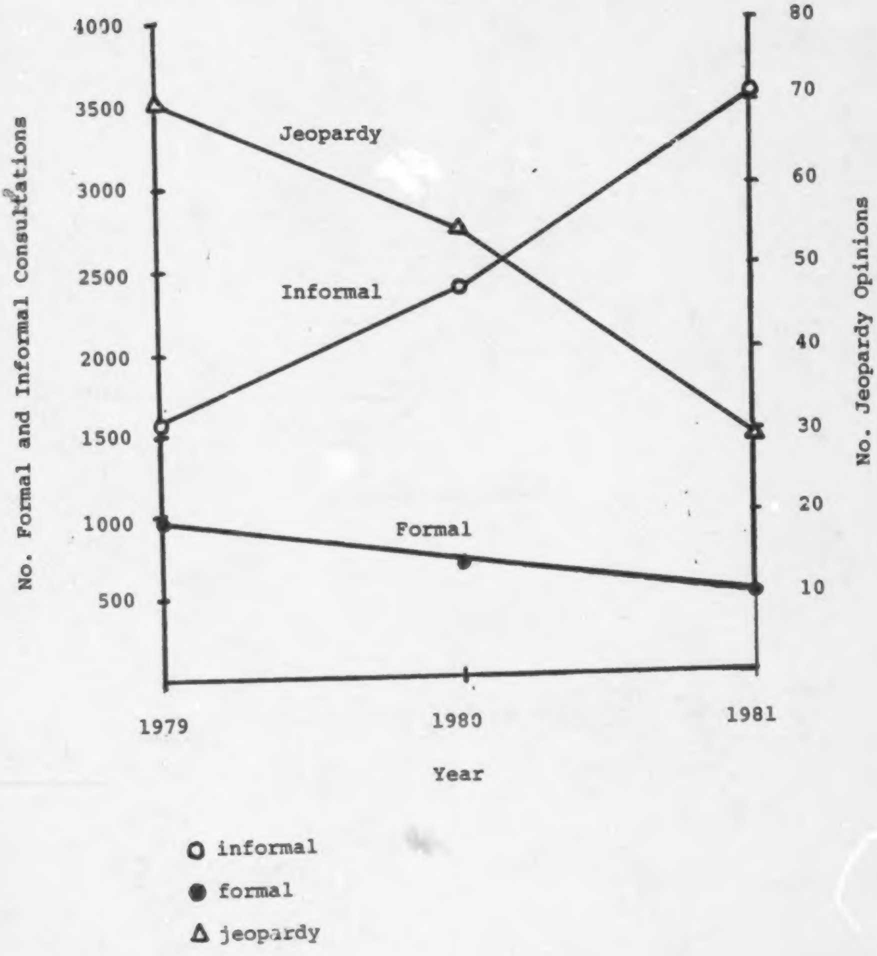
Table 4

Taxa for Which "Jeopardy" Opinions Were Issued: 1979-1981

Taxon	No. Opinions	% of Total
Plants	11	16
Insects	3	4
Clams	5	8
Fish	9	13
Amphibians	0	0
Reptiles	4	6
Birds	22	33
Mammals	13	19
Total	67	

Figure 1

Trends in Informal, Formal, and Jeopardy Opinions: 1979-1981



"Summary of Public Comments"

SOURCE OF COMMENTS	Comments Which Favored an Act w/Stronger Protection for Resource	Comments Which Support the Act As Is	Comments Which Suggurt Technical Changes While Still Providing Current Protection to the Resource	Comments Which Favored an Act Providing Less Protection to the Resource	Comments Which Were More General and Difficult to Categorize
Federal Agencies			4		
State Agencies	5	17	7		1
Private Organizations					
Academic	1				1
Conservation	4				1
Industry/ Agriculture	1	1	1	2	3
Other	1		3		
TOTAL	12 (23%)	18 (34%)	15 (28%)	2 (4%)	6 (11%)

Total comment: 53

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SOLICITOR
WASHINGTON, D.C. 20240

AUG 27 1981

Memorandum

To: Director, Fish and Wildlife Service

From: Associate Solicitor, Conservation and Wildlife

Subject: Cumulative Effects to be Considered Under Section 7 of the Endangered Species Act

This memorandum sets forth the legal requirements for consideration by federal agencies of the "cumulative effects" of other projects and impacts in determining whether a particular proposed action complies with section 7(a) of the Endangered Species Act (ESA or Act), 16 U.S.C. 1536(a). The Solicitor has now withdrawn all prior legal opinions 1/ on cumulative impacts and section 7. This memorandum shall control the scope of consultation and cumulative impact analysis under the Endangered Species Act.

Section 7 requires all federal agencies, in consultation with the Fish and Wildlife Service (FWS or Service), to insure that their actions are not likely to jeopardize the continued existence of endangered or threatened species, or adversely modify their critical habitats. The Service consults with federal agencies and renders a biological opinion on the effects of agency action upon listed species, pursuant to section 7(b), 16 USC 1536(b).

Consideration of the legal requirements for cumulative effects analysis arose in 1978, as the result of section 7 consultations for two water development projects on the North and South Platte Rivers: the Grayrocks Dam and the Narrows Project. As proposed, both projects would affect downstream

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1/ 85 Interior Dec. 275 (July 19, 1978) (supplemented July 24, 1978). An earlier Deputy Solicitor opinion issued on May 25, 1978, was withdrawn on June 5, 1978. (Copies attached).

flows in the Big Bend area of the Platte River in Nebraska, an area designated as critical habitat for the whooping crane. During these consultations, the Service requested a Solicitor's Opinion on whether section 7 requires consideration of the effects of other water projects in the area which were then in the planning or construction phases, would affect the crane's habitat, and would have impacts which might be cumulative to those of the proposal at hand.

An opinion issued on July 19, 1978, concluded that federal agencies must consider the cumulative effects of other projects, whether federal, state or private, during consultations under section 7. Although the July 19 opinion did not expressly define the term "cumulative effects", a July 24, 1978 opinion stated that for any ecosystem upon which an endangered or threatened species depends, all pending project impacts must be considered if those impacts can reasonably be anticipated to occur either before or after the completion of the project which is the subject of consultation.

For the reasons that follow, the definition of cumulative effects used in these prior opinions is inappropriate when applied to section 7.

Consideration of Cumulative Effects Under Section 7

The previous Solicitor's Opinions used concepts developed in NEPA law 2/ which should not be applied, without modification, to section 7 consultations. The first reason is that the

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2/ The Council on Environmental Quality regulations implementing the National Environmental Policy Act (NEPA), 42 U.S.C. § 4332(2)(C), define the term "cumulative impact" as --

> the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

40 CFR 1508.7 (1980).

substantive consequences of requiring such cumulative effects to be considered under section 7 differ from the procedural consequences of environmental planning statutes such as NEPA. Section 7 is a substantive statute which provides:

> Each federal agency shall, in consultation with and with the assistance of the Secretary [of the Interior or Commerce], insure that any action authorized, funded or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with the affected States, to be critical. . . .

16 U.S.C. 1536(a)(2). The Supreme Court, in interpreting a slightly different, earlier version of section 7, has noted the difference from NEPA:

> NEPA essentially imposes a procedural requirement on agencies, requiring them to engage in an extensive inquiry as to the effect of federal actions on the environment; by way of contrast, [section 7 of] the 1973 Act is substantive in effect, designed to prevent the loss of any endangered species, regardless of the cost.

Tennessee Valley Authority v. Hill, 437 U.S. 153, 188 n.34 (1978) (Emphasis in original).

A wholesale adoption of the cumulative effects approach under NEPA is thus inappropriate because prerequisite authority for a proposed action subject to consultation could be denied because *of the effects of other speculative and unrelated future* actions which might be likely to jeopardize a listed species. This substantive result is quite different from that under planning statutes such an NEPA, where an analysis of the cumulative effects of other unrelated future actions means only that such effects be *considered* before proceeding with the proposed action undergoing environmental review. *See*, *Natural Resources Defense Council v. Calloway*, 524 F.2d 79 (2d Cir. 1979).

The second reason for not adopting NEPA's approach to cumulative effects analysis under section 7 is that all other *future federal* actions will themselves be subject to the restraints of section 7 at some later date. It is, therefore, more appropriate to consider the effects of future federal actions in a given area at the time consultation under section 7 is initiated for those actions. That is, the impact of future federal projects should be addressed sequentially, rather than collectively, since each must be capable at some point of individually satisfying the standards of section 7. Thus for federal projects, section 7 provides a "first-in-time, first-in-right" process whereby the authorization of federal projects may proceed until it is determined that further actions are likely to jeopardize the continued existence of a listed species or adversely modify its critical habitat. Environmental planning statutes such as NEPA do not impose such substantive limitations on future federal conduct, and so it is more appropriate for them to require the collective consideration of reasonably foreseeable, future federal activities. The substantive nature of section 7, however, suggests that a project-by-project sequential review of federal actions is a more appropriate approach for endangered species consultation.

A recent case which considered NEPA and the ESA side by side in a given factual situation implicitly recognized different approaches for cumulative impact analysis under NEPA and the ESA, requiring broad agency consideration of cumulative impacts under NEPA while focusing on a more limited analysis of impacts under section 7.

In *North Slope Borough v. Andrus*, 486 F. Supp. 332 (D.D.C. 1980), *revd. on other grounds*, 642 F.2d 589 (D.C. Cir. 1980), the court considered NEPA and ESA compliance for offshore oil and gas leasing. Both the district and appeals courts held that the cumulative effects of "other significant Federal and state energy development projects . . . in progress and planned for the North Slope Region," had to be considered in the EIS. 486 F. Supp. at 347; 642 F.2d at 600. The cumulative effects of these other actions, however, were not mentioned by either court in their discussion of the proper scope of agency review under section 7. Instead, for section 7 purposes, the courts only focused on the impacts of the lease sale itself. 486 F. Supp. at 350-51; 642 F.2d at 608-609. Thus, though both courts required consideration of the cumulative effects of unrelated future state and federal actions for purposes of NEPA, each implicitly endorsed a more limited review of the leasing proposal under section 7.

Section 7 Consultation Process

Having concluded that limited analysis of cumulative effects is required under section 7, we will now discuss how that analysis should occur.

Obviously the first task in consultation is to define the scope of the project under review. In the case of construction activities, a "project" is both the proposed activity itself and any "connected" activity as well. Connected activities are those which are related to (interrelated) or dependent upon (interdependent) a proposed project. Interdependent actions are those which have no independent utility apart from the proposed project. Interrelated actions are those which are part of a larger project and cannot proceed unless other actions are taken previously or simultaneously. 3/ Thus, in the case of a resevoir project with a proposed lattice work of irrigation canals, in all likelihood the canals would be considered part of the "project" for purposes of section 7 consultation because it is unlikely that they would have any independent utility *but for* the impoundment.

3/See *Sierra Club v. Calloway*, 499 F. 2d 982 (5th Cir. 1974); *Friends of the Earth v. Coleman*, 518 F.2d 323 (9th Cir. 1975); *Trout Unlimited v. Morton*, 509 F.2d 1276 (9th Cir. 1974); *Sierra Club v. Stamm*, 507 F.2d 788 (8th Cir. 1974); *Sierra Club v. Froehlke*, 392 F. Supp. 130 (D. Mo. 1975), *aff'd* 534 F.2d 1289 (5th Cir. 1975); *Environmental Defense Fund v. Armstrong*, 356 F. Supp. 131 (N.D. Cal. 1973), *aff'd* 487 F. 2d 814 (9th Cir. 1974); 40 C.F.R. § 1508.25(a).

See also *Atchison, Topeka and Sante Fe R.R. v. Callaway*, 382 F. Supp. 610 (D.D.C. 1974); *City of Rochester v. U.S. Post Office*, 541 F.2d 967 (2d Cir. 1976)

Once the "project" has been defined, the consultation team should then focus on analyzing the environmental baseline in the affected area. This is necessary for determining what the environmental "status quo" is going to be at the time of consultation on the proposed project. The impacts of the project under review should then be measured against this environmental baseline.

In determining the environmental baseline, the consultation team should consider the past and present impacts of all projects and human activities in the area, regardless of whether they are federal, state or private in nature. This is logical since the actual impacts of these projects and activities are not dependent upon the origin of their sponsorship; rather, they all are contributing influences which mold the present environmental status quo of any given area.

Furthermore, the consultation team should consider as part of the environmental baseline the anticipated impacts of all proposed federal projects in the affected area which have previously been the subject of section 7 consultation and received a favorable biological opinion. This is consistent with the "first-in-time, first-in-right" approach discussed earlier, since a project passing muster under section 7 is in effect allocated the right to consume (and is presumed to utilize) a certain portion of the remaining natural resources of the area. It is this "cushion" of remaining natural resources which is available for allocation to projects until the utilization is such that any future use may be likely to jeopardize a listed species or adversely modify or destroy its critical habitat. 4/ At this point, any additional federal activity in the area requiring a further consumption of resources would be precluded under section 7.

However, the consultation team should not consider as part of the environmental baseline the anticipated impacts of future federal projects which have not been previously reviewed under section 7. Those projects are not part of the environmental

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4/ We recognize that a determination of the size of this so called "cushion" may be difficult to make in some instances and may escape enacting delineation and consist of merely a range of anticipated impacts and effects. Nevertheless, we conclude that the 1979 Amendments to the Act requires some sort of final biological analysis and recommendation to result from the consultation process. 125 Cong. Rec. 9650 (Oct. 24, 1979); H.R. Rep. No. 697 96th Cong., 1st Sess. 12 (1979).

baseline and have not had their priority set under the first-in-time system. They would undergo separate review by the consultation team and could only be authorized if it was subsequently concluded that a sufficient "resource cushion" still remained, or if an exemption was granted by the Endangered Species Committee under subsection 7(h) of the ESA.

The impact of state or private actions which are contemporaneous with the consultation in process should also be factored into the environmental baseline for the project area.

Having thus established an environmental baseline, the consultation team must then determine what the _direct_ and _indirect_ effects of the project under review _will be_. Such effects must be analyzed as part of the consultation process. _See Tennessee Valley Authority v. Hill_, 439 U.S. 153 (1978); _National Wildlife Federation v. Coleman_, 529 F. 2d 1064 (5th Cir. 1976); _See also North Slope Borough, v. Andrus_, 486 F. Supp. 332 (D.D.C.), _aff'd in part and rev'd in part_, 642 F.2d 589 (D.C. Cir. 1980).

Finally, the consultation team should consider the "cumulative impacts" of _future_ state or private sections where such actions are _reasonably certain_ to occur prior to the completion of the federal project. A non-federal action is "reasonably certain" to occur if the action requires the approval of a state or local resource or land use control agency and such agencies have approved the action, and the project is ready to proceed. Other indicators which may also support such a determination include whether the project sponsors provide assurance that the action will proceed, whether contracting has been initiated, whether there is obligated venture capital, or whether State or local planning agencies indicate that grant of authority for the action is imminent. These indicators must show more than the _possibility_ that the non-federal project will occur; they must demonstrate with reasonable certainty that it _will occur_. The more that state or local administrative discretion remains to be exercised before a proposed state or private action can proceed, the less there is reasonable certainty that the project will be authorized. In summary, the consultation team should consider only those state or private projects which satisfy all major land use requirements and which appear to be economically viable.

J. Roy Spradley, Jr.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SOLICITOR
WASHINGTON, D.C. 20240

AUG 31 1981

Memorandum

To: Assistant Secretary, Fish and Wildlife and Parks

From: Associate Solicitor, Conservation and Wildlife

Subject: Overseas Application of Section 7 of the Endangered Species Act

This memorandum is in response to your request to determine whether Section 7 of the Endangered Species Act (Act or ESA) has international application.

Introduction

Section 7 of the Endangered Species Act of 1973, as amended, 16 U.S.C. § 1536, provides in pertinent part:

> Each federal agency shall, in consultation with and with the assistance of the Secretary insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with affected States, to be critical, unless such agency has been granted an exemption for such action by the Committee pursuant to subsection (h) of this section. In fulfilling the requirements of this paragraph each agency shall use the best scientific and comercial data available.

ESA § 7(a)(2), 16 U.S.C. § 1536(a)(2).

The prohibitions of Section 7 can be divided into two separate parts: the "jeopardy" clause and the "critical habitat" clause. In past opinions and regulations of the Department of the Interior these two clauses have been interpreted in the following manner. The jeopardy clause has been applied to all federal agency actions including those occurring on the high seas and in foreign countries, as well as those within the United States. 1/ Whereas, because the critical habitat clause specifically requires "consultation with the affected states," it has been interpreted as not applying to foreign countries. 2/

In view of this dichotomy in interpreting the two clauses, the regulation presently implementing the jeopardy clause reads, in pertinent part:

> Section 7 (16 U.S.C. 1536) applies to all listed species of fish, wildlife, or plants . . . . [I]t requires every Federal agency to insure that its activities or programs in the United States, upon the high seas, and in foreign countries, will not jeopardize the continued existence of a listed species. . . .

50 C.F.R. § 402.01 (emphasis added).

The controversy surrounding this regulation and its interpretation of the responsibilities under the jeopardy clause involves the emphasized language extending the reach of the statute to foreign countries and the high seas.

1/ Memorandum on Federal Activities Jeopardizing Foreign Species from Associate Solicitor, Conservation and Wildlife to Director, Fish and Wildlife Service (April 12, 1977).

2/ Memorandum on Designating Critical Habitat for Foreign Species from Assistant Solicitor, Fish and Wildlife to Associate Director, Federal Assistance, Fish and Wildlife Service (February 13, 1976). The United States District Court for the District of Colorado, however recently held that the Act does require designation of critical habitat in foreign countries. Colorado River Water Conservation District v. Andrus, Civil No. 78-A-1191 (August 3, 1981). This is contrary to the traditional position of this Department. The judgment is not final in the case, but the Department intends to appeal this holding when it is.

Conclusion

Upon re-examining the relevant arguments on the major issues in this matter, we now conclude that the jeopardy clause of Section 7 does not apply to federal actions which occur within a foreign country. For jurisdictional reasons discussed later in this opinion, we take no position on whether Section 7 applies on the high seas. We do conclude, however, that Section 7 does apply to federal agency actions on the Outer Continental Shelf. All previous legal opinions of this Department which reached a contrary conclusion are hereby withdrawn.

Discussion

Section 7 requires, among other things, that all federal agencies insure that their actions will not jeopardize the continued existence of endangered or threatened species. In order to achieve this objective, the Act requires consultation between the Secretary of the Interior and the agency whose actions may affect an endangered or threatened species.

The consultation process involves three steps. First, the agency determines whether its proposed action "may affect" a protected species. If it may, consultation between FWS, and the agency must be initiated.

After discussion and review, the FWS issues a written statement to the Federal agency concerned, setting forth the Service's biological opinion on whether the proposed action is or is not likely to jeopardize the continue existence of the species. If the decision is that there is no likelihood of jeopardy, then the Agency's consultation requirement has been completed. If, however, the Service concludes that the proposed action is likely to jeopardize the species, the Service is to suggest reasonable and prudent alternatives which it believes would not jeopardize the species and could be taken by the federal agency.

Federal Actions in Foreign Countries

We conclude that the Section 7 consultation process does not apply to federal agency actions in foreign countries. In support of our conclusion, we look first to the express language of the statute and the general rules of statutory construction. Although the jeopardy clause itself did not originally contain and was not amended in 1978 and 1979 to include an express reference to "affected states," as is contained in the critical habitat clause, other amendments to Section 7 do support the conclusion that the jeopardy clause does not apply to federal agency actions in foreign countries. These amendments address primarily the exemption process whereby an agency action may be approved even though it would jeopardize a protected species. Since this exemption process fails to expressly reflect the possibility that an exemption may be necessary for a federal action in a foreign country, it supports the proposition that the jeopardy clause was not intended to apply to federal actions in foreign countries.

In addition to the express language of the statute, the legislative history of the 1978 and 1979 amendments establishing the exemption process indicates that Congress was focusing on the effect federal agency actions would have within areas under the jurisdiction of the United States. For example, the Conference Report on the 1978 amendments states:

> Under the new Section 7, a Federal agency, the Governor of a state where the agency actions, species, and critical habitat are located, or an individual seeking a permit or license, may submit to the Secretary an application for an exemption. . . . Upon receipt of the application, the Secretary must promptly notify the Governor or Governors of any affected State(s) and submit the application of the review board.
>
> The review board will consist of three members: one appointed by the Secretary, one appointed by the President after consideration of the recommendations from the Governor(s), of the affected State(s), and an administrative law judge. . . .

H.R. Rep. No. 1804, 95th Cong., 2d Sess. 19 (1978).

After making their initial determination, the review board submits their report to the Endangered Species Committee, as established in section (7)(e), 16 U.S.C. § 1536(e). The Committee is composed of the following seven members: the Secretaries of the Interior, Army, and Agriculture; the Administrators of NOAA and EPA; the Chairman of the Council of Economic Advisers; and a person appointed by the President upon recommendation of the Governor(s) of the affected State(s). Originally, the Senate bill included the Governor of the State on the panel, but at conference the House's version was adopted allowing for appointment of a representative of the Governor.

The reasons for the inclusion of a State representative was explained in the Senate Report as follows:

> [T]here was a perceived need to have someone on the Endangered Species Committee who is in touch with and understands the needs and desires of

> those persons close to or dependent on the Federal activities which would be the subject of the exemption application.

S. Rep. No 874, 95th Cong., 2d Sess. 5 (1978).

This language clearly reflects Congressional sentivity for soliciting the views and opinions of the Chief Executives of the States to be affected by the impact of Section 7 on a given project. If Congress was so solicitous of the jurisdictional prerogatives of the governors of this nation, it should not be presumed that it was any less sensitive to the sovereign prerogatives of the rulers of foreign countries. That is, if Congress intended to require that Section 7 be applied to federal actions in foreign countries, it would have inserted some provision allowing for the Secretary of State [3] or representatives of the affected foreign countries to be on these panels. Instead, membership on both the review board and Endangered Species Committee is domestically-oriented.

Furthermore, in those sections of the ESA which were clearly intended to apply to foreign countries, Congress either expressly required consideration of the programs and policies of the affected foreign nations or mandated the involvement of the Secretary of State. See 16 U.S.C. 1533(b)(2) and 16 U.S.C. § 1538.

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[3] Section 7(i), 16 U.S.C. § 1536(i) provides a procedure whereby the Secretary of State may prohibit the consideration of an application for an exemption if such exemption and proposed action would be in violation of an international treaty obligation or other international obligation of the United States. We do not believe that this indicates an intent to apply Section 7 to federal agency actions in foreign countries. Rather, this provision is triggered whenever a federal agency action within the United States involves international treaty obligations.

While recognizing the inherent risks associated with determining Congressional intent through Congressional silence, any ambiguity on the issue of the application of Section 7 to foreign countries is resolved upon the consideration of various foreign policy concerns.

First of all, the consultation procedures under Section 7 would undoubtedly cause significant delays in administering assistance activities in foreign countries and would severly hamper the flexibility and responsiveness of American diplomacy abroad. Nor could the consultation process insure confidentiality which is often a prerequisite to foreign policy initiatives, intelligence operations or military assistance.

There is also the problem of foreign sovereignty considerations. The consultation and exemption process does not establish procedures for considering and deferring to the views of foreign governments with respect to their own development priorities, or plans for fish and wildlife conservation in their own countries.

For all of the above reasons, therefore, we conclude that the jeopardy prohibition under Section 7 does not apply to federal agency activities within foreign countries.

Federal Agency Actions on the High Seas Beyond the Outer Continental Shelf

Under the division of jurisdiction set forth in the Endangered Species Act, 10 U.S.C. § 1532(10, 4/ the Department of Commerce has the primary responsibility for the conservation of marine species which live upon the high seas beyond the Outer Continental Shelf (OCS). Thus, if Section 7 has any

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4/ Pursuant to the Reorganization Plan No. 4 of 1970, 5 U.S.C. app. (1976), the Director of the U.S. Fish and Wildlife Service and the Director of the National Marine Fisheries Service, signed a Memorandum of Understanding which divided jurisdictional responsibilities under the Endangered Species Act. *See* Memorandum of Understanding Between the U.S. Fish and Wildlife Service, United States Department of the Interior and the National Marine Fisheries Service, National Oceanic and Atmospheric Administration, United States Department of Commerce Regarding Jurisdictional Responsibilities and Listing Procedures Under the Endangered Species Act of 1973 (signed August 28, 1974 by Robert W. Schoning, Director, NMFS and Lynn A. Greenwalt, Director, FWS).

application at all on the high seas, federal agencies would consult with the Department of Commerce and not the Department of the Interior. We, therefore, have no need to decide whether Section 7 applies to federal agency actions on the high seas beyond the OCS.

Federal Agency Actions on the Outer Continental Shelf

Section 4(a)(1) of the Outer Continental Shelf Lands Act, 43 U.S.C. § 1333(a)(1), generally extends the laws of the United States to the OCS. One such law is the Endangered Species Act. Thus Section 7 applies to federal agency actions on the OCS.

Unlike the situation involving federal agency actions on the high seas beyond the OCS, agency actions on the OCS could impact listed species under the jurisdiction of the Department of the Interior. For example, in the case of OCS Lease Sale # 53, BLM consulted with the Fish and Wildlife Service over the potential impact of the sale on the California Sea Otter.

The application of Section 7 to Federal agency activities on the OCS has also been the subject of recent litigation involving oil and gas leasing activities. *See Conservation Law Foundation v. Andrus*, 623 F. 2d 712 (1st Cir. 1979); *North Slope Borough v. Andrus*, 486 F. Supp. 332 (D.D.C.), *aff'd in part, and rev'd in part*, 642 F. 2d 589 (D.C. Cir. 1980; *State of California, et al. v. Watt, et al*. No. 81-2080 NRP (C.D. Cal. Aug. 18, 1981). In these cases, the Government argued that it had complied with all of the procedural and substantive requirements of Section 7 as they related to various oil and gas leasing proposals. We believe, therefore, that the application of Section 7 to federal actions on the OCS is well established.

(Sgd.) J. Roy Spradley, Jr.

J. Roy Spradley, Jr.

cc: Director, USFWS
General Counsel, NOAH, Department of Commerce
Department of State, OES/ENR,
Attention: George Furness, Wildlife Officer

SOCIETY FOR ANIMAL PROTECTIVE LEGISLATION
P. O. Box 3719
Georgetown Station
Washington, D. C. 20007

STATEMENT FOR HEARINGS ON OVERSIGHT OF THE ENDANGERED SPECIES ACT

by Christine Stevens, Secretary

December 8, 1981

In 1978, the Endangered Species Act was thoroughly examined and amended to deal with all the objections raised by those who felt the Act needed modification. A committee was created to deal with the rare cases in which consultation failed to resolve differences. To date, it has only been necessary to call upon the committee in two instances. Nevertheless, it is established in law and available for use.

It is unfortunate that controversy still continues on critical habitat designation. Section 7 has done the job it was intended to do: namely, prevented avoidable destruction by government agencies of endangered species and the habitat most esstential to them. It has done this modestly and effectively through the consultation process. We urge that it not be weakened.

Second only to the controversy about critical habitat is that relating to a single animal--the bobcat. The Endangered Species Act eliminated importation of spotted cat furs from Asia, Africa and South America into the United States. The Convention on International Trade in Endangered Species sought to regulate international trade in these skins; and, although smuggling has not been stamped out as yet with regard to the skins of the most endangered of the spotted cats, nevertheless, our law and the international treaty have reduced the decimation of these animals, a number of species of which would probably now be almost gone were it not for these valuable restrictions. However, these very restrictions brought enormous pressure on the United States' own spotted cat, the bobcat, whose hide was considered virtually valueless until the rage for spotted cats spread worldwide.

The bobcat is a valuable predator living largely on the rodents and rabbits that compete with livestock for forage. A shy and elusive creature, its hearing is extremely acute, its spotted coat an effective camouflage, so that people get enormous enjoyment when they succeed in sighting a bobcat--an increasingly rare occurrence, according to Westerners I have consulted.

I urge this distinguished subcommittee not to weaken the Act as the exploiters of this beleaguered species are exerting such pressure to do. The Act correctly states that export should not be allowed without a no detriment finding. It has proved exceedingly difficult to obtain sound enforcement because of the spectacular change in value of bobcat skins which now may bring as much as $650 each.

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) was written and has been ratified by 75 nations for the express purpose of providing adequate protection for species in trade. The bobcat is the very epitome of the reasons why this treaty is so vitally important to the United States and to the world. Everyone knows what happened to the blue whale because its oil was so valuable and because it could be had for the killing, with no investment necessary for feeding and maintenance. It was pushed to commercial extinction by the very industry to which it would now be so valuable if industry's greed had not overcome its judgment. Now, even though blue whales have been protected for a quarter of a century by international agreement, they were reduced to such a pitiful remnant of their primeval population that they have been unable to recover. The whalers are reduced to killing the small minke whale which they scorned so long as there were big profitable whales to kill. Their industry is dying, indeed the major whaling country now has to provide cheap government loans and subsidies to keep its whalers going at all.

It is easy to foresee a parallel with the fierce exploitation of the bobcat. Already extinct in Ohio, Indiana and Iowa, the bobcat needs careful attention and thorough study both as to its populations and their trends.

Yet State fish and wildlife agencies, egged on by trappers and fur exporters, are trying to divest both the Endangered Species Act and CITES of their vigor, singling out for special attack, the requirement of a federal judge for reliable population estimates of bobcats in the different states. Even the International Whaling Commission, which allowed the blue whale to sink to commercial extinction, regularly produces population estimates from its scientific committee so that the Commissioners can exercise judgment. For years the Commissioners disregarded the warnings of the Scientific Committee preferring to heed the pressure from the industry, with the resulting undermining of the very object of their alleged interest. Let us be forewarned by this grim example.

Other members of the cat family in the United States have been extripated from enormous parts of their former ranges. Jaguars are extinct in our country; jaguarundis, margays and ocelots are rare. The Florida panther is teetering on the brink of extinction. The small number of bobcat kittens born is further reduced by the fact that unlike coyotes or wolf families, the mother bobcat receives no help in providing food for them. I would refer you to "Following the shadowy trail of the cat that walks by itself," by Hope Ryden, Smithsonian, June, 1981, for specific studies on the survival of the young. It is not easy to bring back a bobcat population once it has been too far depressed by trapping.

Vocal though trappers' organizations are, it is of interest to note that 79% of the American public is opposed to the use of steel traps to capture animals. (Survey by Dr. Stephen R. Kellert, Yale School of Forestry and Environmental Studies, funded by the U.S. Fish and Wildlife Service, 1979.) When the victims are a species whose status is threatened with extinction and listed on CITES Appendix II, this large majority opinion would be further reinforced and increased. The public does not want to have protection weakened for a threatened American mammal taken by a painful method and sold for luxury fur coats. Indeed, it is hard to think of anything that would be more unpopular with the public. But by far the greatest reason for not weakening the Act in the several ways bobcat exploiters propose is to ensure that the bobcat populations that still exist are maintained.

I would now turn to the points listed in Interior's November 10 news release on the Endangered Species Act. Special attention was given to "whether the Act should cover separate populations and subspecies of wildlife as opposed to entire species." Coverage of populations and subspecies is an essential requirement in a democracy. To tell people they can be deprived of a species in their area just because a few individual examples are being maintained in some distant place is wholly unacceptable. It is dangerous for any species, too, to have its natural populations and subspecies reduced to a point where a single disaster could wipe it out for good. It would be turning the clock back with a vengeance to end protection for subspecies and populations. The United States, long the leader in working to prevent extinctions would find itself abruptly in the position of one of the laggards among nations who fail to recognize the importance of achievements already won and of the greater efforts that must be made now.

Second on Interior's list of priorities was the question, "Should the ESA afford protection to 'lower life forms'?" An excellent affirmative response to this question is contained in the remarks made by Senator Buckley, Under Secretary of State for Security Assistance, Science and Technology, when he addressed the Strategy Conference on Biological Diversity, November 16, 1981. "We are still too ignorant of ultimate consequences," he said, "to understand in full the urgent need to protect even the most inconspicuous forms of life so that we do not diminish the rich variety of biological resources that continue to exist.

"Nevertheless, the urgency is there, and we need to impress upon the public consciousness that extinction is an act of awesome finality. Extinction is one of the few processes that man cannot reverse. But if man cannot restore a species, he is nevertheless fully capable of destroying them, which he is presently doing at an astonishing rate. This century has witnessed over half the extinctions of animal species known to have occurred in recorded history; and, largely because of the vast scale on which tropical rain forests are being cut around the world. It is estimated that by the year 2000 upwards of a million additional species -- about 20% of those now in existence -- may become extinct. Yet on this threatened biological diversity depends in significant degree the fundamental support system for man and other living things."

He further states "...fully 40% of all modern drugs have been derived from nature...Recent well publicized break-throughs in genetic engineering may be what is required to focus public attention on the explicit interest each one of us has in seeing that the global stock of irreplaceable genetic material isn't squandered." I would ask that the entire speech be placed in the record. It could stand as a model for federal government position and guide to action.

The next question, "Should additional economic considerations be added to listing process?" was answered when the 95th Congress added the Review Board and the Endangered Species Committee to the provisions of the Act. The Chairman of the Council of Economic Advisors is designated as a member of the Committee, and, in conjunction with the other members of this cabinet-level committee, has the authority to put economic considerations ahead of the protection of any endangered species, even to the point of extinction. Such a decision is a serious matter which can only be made at a high level. The listing process, on the other hand, must be based on scientific information, unmixed with other pressures and judgments. Listing has to be based on biological findings, otherwise the integrity of the Act would be undermined.

Question 5, "Should an experimental population's category be added to Section 4?" can be answered in the affirmative, if it is worded to provide adequate protection for the experimental population and for the original population.

Question 6. "Should the Section 7 jeopardy standard be modified?" I know of no reason to do so.

Question 7,"Should 'biological assessment' requirement be dropped from the Act?". It would appear to be most unwise to do so if construction is to be undertaken in an area where the Secretary has advised that, based on the best scientific information available, an endangered species may be present. How else should its presence be determined?

Question 8, "Should the exemption process be modified?" cannot be answered with a flat "yes" or "no". A great deal of effort went into the development of this amendment to the 1973 Act with all shades of opinion represented in its formulation. We recommended that the head of the President's Council on Environmental Quality be a member of the Endangered Species Committee and continue to believe that the expertise thus available would be valuable. Most important is to avoid any weakening which might tend to make exemption a less serious matter than under existing law. Extinction is final. It cannot be reversed.

Question 9, "Should ICAC be abolished?" Despite the fact that the International Convention Advisory Commission's funding for staff has been ended, we believe that the Commission serves a useful purpose and should not be abolished. The Congress brought ICAC under the Department of the Interior in 1979 to provide accountability to that agency. In doing so, however, it recognized that there should continue to be an independent scientific body reviewing the permit process in compliance with CITES. ICAC plays an important role in ensuring objectivity. Further, it provides considerable expertise in a broad field through its representatives from the Department of Agriculture, National Institutes of Health, the Smithsonian, and others. Its meetings serve to keep these agencies, which affect and are affected by international trade, in touch with current problems and actions with respect to CITES and endangered species, generally. To abolish it would seriously impinge on our nation's credibility with respect to scientific objectivity in carrying out our treaty obligations.

Question 10, "Should there be a modification of the Act to reduce the amount of control over captive wildlife?" Based on meetings over the years with representatives of zoological gardens, I believe that the Act allows sufficient regulatory modification to obviate any need to rewrite the Act in this area. At one time, there were considerable complaints concerning the delays experienced in obtaining permits. Animal welfare groups met with the industry and the FWS to seek solutions, and, I believe, the system is now working far better. Administrative changes can be made much more easily than changes in the law, and they can also be changed again without requiring the Congress to take action. I believe the law on captive wildlife should stand.

Question 11, "Should a central clearinghouse be established to streamline multi-agency issuance?" This could be helpful if it is done right. The purpose of permits is to protect endangered species. The standards demanded of those who trade in wildlife should be high, since poaching and smuggling are rampant in this lucrative field. At the same time, legitimate trade by those who do meet strict standards of integrity and specific documentation should not be subject to unnecessary delays. Where live animals are concerned, delay must be avoided for reasons of their health and welfare.

Although I will not attempt to address all the Priority II questions on Interior's list, Number 12, "Should the registration requirements for importers and exporters in Part 14 be removed?", must be answered in the negative. It is essential to have a record of persons engaged in international trade in wildlife and wildlife products.

This Subcommittee deserves much credit for its effective action in bringing the Lacey Act up to date, and we suggest that the same criminal penalty provisions used in the 1981 Lacey Act Amendments be added to the Endangered Species Act.

We lobbied successfully in 1979 for increased funding for the States under the Act. We are prepared to continue to seek funding for the States to carry out their obligations under the Act, and we congratulate those states that have developed funding methods on their own. We strongly oppose, however, any attempt to dismantle federal responsibilities. In international matters, it is essential that the federal government speak for the country. Broadly speaking, the future of mankind depends upon success in maintaining natural diversity--that is in preventing species from becoming extinct at the current constantly increasing rate. Parochial interests cannot be permitted to put selfish aims first in so serious a matter if there is to be any possibility of success.

Short-term financial gain that destroys our biological future is unacceptable. To foolishly squander what the earth still offers would be the height of stupidity. More, it would be sacrilege.

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

DEFENDERS OF WILDLIFE, INC.)
Plaintiff)
v.) Civil Action No. 79-3060
ENDANGERED SPECIES SCIENTIFIC)
AUTHORITY, et al.)
Defendants)

FILED
DEC 15 1981
CLERK, U.S. DISTRICT COURT
DISTRICT OF COLUMBIA

MEMORANDUM OPINION

The defendants are federal agencies and officials responsible for protecting the bobcat. The Court prohibited defendants from authorizing export of bobcats killed after July 1, 1981 until they promulgate guidelines consistent with the Court of Appeals' decision in this action, and make findings on the basis of those guidelines. Having issued guidelines and findings, defendants move the Court to vacate its injunction. The Court concludes that defendants' guidelines fail to comply with either the Court of Appeals' decision or the requirement of the Administrative Procedure Act, 5 U.S.C. § 552 et seq., for a reasoned presentation of proposed rules. Accordingly, the Court denies defendants' motion.

I.

Defendants' obligations for protecting the bobcat arise under the Convention on International Trade in Endangered Species of Wild Fauna and Flora, opened for signature March 3, 1973 (1976), 27 UST 1087, T.I.A.S. No. 8249 (the Convention). The United States has listed the bobcat in appendix II of the Convention. Appendix II covers "all species which although not necessarily now threatened with extinction may become so unless trade in specimens of such species is subject to strict regulation in order to avoid utilization incompatible with their survival." Article II, para. 2. Species listed in appendix II may be exported only under a permit. Permits may be granted only if the country's Scientific Authority finds that export "will not be detrimental to the survival of the species." Article IV, para. 2 of the Convention.

The Court of Appeals held that our nation's Scientific Authority cannot made a valid no-detriment finding without "(1) a reliable estimate of the number of bobcats and (2) information concerning the number of animals to be killed in the particular season." Defenders of Wildlife v. Endangered Species, etc., 659 F.2d 168, 178 (D. C. Cir.) cert. denied sub nom. Intl. Assn. Fish & Wildlife v. Defenders of Wildlife, 50 USLW 3351 (Nov. 3, 1981). With the agreement of the parties, on remand this Court dismissed the case as it pertained to export of bobcats killed during previous seasons. This Court then entered a permanent injunction barring future export of bobcats absent guidelines consistent with the Court of Appeals' decision and findings on the basis of those guidelines.

II.

The standard for reviewing defendants' compliance with the Court's injunction is governed by Fed.R.Civ.Pro. 60(b)(5). That rule provides, in relevant part, for relief from a final judgment or order where "the judgment has been satisfied, released or discharged. . .or it is no longer equitable that the judgment should have prospective application."

Defendant Fish and Wildlife Service (the Service), this country's Scientific Authority under the Convention, published guidelines on May 26, 1981 in the Federal Register. 46 Fed. Reg. 28192. The guidelines do not comply with the

Court of Appeals' clear holding. First, the guidelines fail to indicate that reliable estimates of population are required for export approval. Instead, the Service grudgingly requested each state to submit an estimate of its current bobcat population "to the extent it is able (to) make such an estimate." 46 Fed. Reg. at 28193. Second, the guidelines fail to require information concerning the number of bobcats to be killed. The Service characterized this requirement as "very similar to the previous minimum requirements for a management program, particularly the requirement that individual states should determine their harvest level objective annually." 46 Fed. Reg. at 28193. The Service's interpretation would make superfluous the Court of Appeals' holding. The clear meaning of the Court of Appeals' holding on this point is that information in the form of limitations on numbers of bobcats to be killed is a prerequisite for a valid no-detriment finding.

III.

In reviewing defendants' guidelines and findings under the arbitrary, capricious and abuse of discretion standard of the Administrative Procedure Act, 5 U.S.C. § 706(2)(A), the Court may not substitute its judgment for that of the agency. But reasoned decisionmaking is required. Environmental Defense Fund, Inc. v. Costle, 657 F.2d 275, 283 (D. C. Cir. 1981). This standard of review requires defendants to explain adequately the considerations relevant to making no-detriment findings for export of bobcats. In the context of this case, reasoned decisionmaking means an analysis supporting the reliability of methodology for estimating bobcat population and the standards relating kill levels to a no-detriment finding. See National Welfare Rights Organization v. Mathews, 533 F.2d 637, 649 (D. C. Cir. 1976), quoting Wright, The Courts and the Limits of Judicial Review, 59 Cornell L. Rev. 375, 395 (1974); Environmental Defense Fund v. Ruckelhaus, 439 F.2d 584, 597 (D. C. Cir. 1971).

The guidelines do not state how the Service will assess the reliability of population estimates. They do not state how the Service will decide whether a particular kill levelwill be detrimental to the survival of the species. The Service has considerable discretion to determine the methods by which population estimates are to be made and in evaluating them. Defenders of Wildlife v. Endangered Species, etc., 659 F.2d at 178. The Service abused this discretion by not describing acceptable methodologies for population estimates or considerations underlying kill levels. It is not acceptable to delegate such functions to the states, particularly where the guidelines demonstrated such marked hostility to the Court of Appeals' decision. The Service labeled that Court's requirements an obvious departure from wildlife management as it has traditionally been practiced in almost all states. 46 Fed. Reg. at 28193. The approach outlined in the guidelines was called an "interim measure," pending appeal of the decision to the Supreme Court. Id. at 28194.

The Court of Appeals described defendants' approach as authorizing bobcat exports despite the absence of convincing facts for making no-detriment findings. These guidelines and subsequent acts demonstrate an unchanged attitude. Four days after publishing proposed findings, defendants noted their intention to remove the bobcat from appendix II of the Convention. 46 Fed. Reg. 45652 (Sept. 14, 1981). This would leave bobcats without federal protection. This removal is supported largely with population estimates submitted under the May 26 guidelines.

IV.

The Court does not continue prohibiting defendants from authorizing export of bobcats from the states lightly. Defendants argue that the Court's injunction trenches on state autonomy. But a state's management initiative "is not an adequate substitute for the actual facts concerning population and number of killings." Defenders of Wildlife v. Endangered Species, 659 F.2d at 178. Defendants' proposed and final findings cannot stand since they were based on responses to invalid guidelines.

Plaintiff argues that updating state findings subsequent to the comment period violated the Administrative Procedure Act. The Court disagrees. Defendants exercised their discretion sensibly to keep the information current.

For the foregoing reasons, the Court denies defendants' motion. An appropriate order is attached. The Court expects defendants to issue new guidelines forthwith and make findings that comply with the Court of Appeals' decision in due course.

JUNE L. GREEN
U. S. DISTRICT JUDGE

December 15, 1981

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

DEFENDERS OF WILDLIFE, INC.)
Plaintiff)
v.) Civil Action No. 79-3060
ENDANGERED SPECIES SCIENTIFIC)
AUTHORITY, et al.)
Defendants)

FILED
DEC 15 1981
JAMES F. DAVEY, Clerk

ORDER

Upon consideration of defendants' motion to vacate injunction, defendant-intervenor's response in support thereof, plaintiff's opposition, defendants' reply, plaintiff's rebuttal, and the entire record in this action, for the reasons set forth in the attached memorandum opinion, it is by the Court this 15th day of December 1981,

ORDERED that defendants' motion to vacate injunction is denied.

JUNE L. GREEN
U. S. DISTRICT JUDGE

FOLLOWING THE SHADOWY TRAIL OF THE CAT THAT WALKS BY ITSELF

(By Hope Ryder)

A NATURALIST TRACKS THE SHY, ELUSIVE BOBCAT IN THE WILD AND CONCLUDES THAT OVERTRAPPING COULD THREATEN THE SPECIES' POPULATION

Few people are ever privileged to see a wild bobcat. I had all but despaired of doing so when, one day, I leaned down to pull a cactus spine out of my shoe and one stepped out of the Arizona brush not 15 feet away. The bold creature stretched, yawned, and turned an indifferent back on me. I was not so blaisé; I wanted to shout for joy—at the very least perform a short caper! That bobcat was the first of its kind I had met in the wild in nearly a year of tracking the species.

The tawny animal was handsome, probably a male, and looked to weigh about 30 pounds. Seemingly oblivious to my presence, it began to stalk the edge of the brush, from time to time pausing to monitor sounds inaudible to my ears. As I stood and watched, I had to fight down an impluse to shoot pictures. From experience I know that to point a camera at a wild animal the moment it reveals itself is to get a picture, if at all, of an animal in retreat.

I was mystified by the bobcat's lack of caution, so inconsistent with the species' reclusive nature. The intrepid animal sat down and nonchalantly began to wash its face with its oversized paws. A tongue-curling yawn signaled when the grooming session was over and I quickly imitated the action. The yawn, according to some ethologists, is sometimes used by members of the cat family to disarm and appease, and I was eager to send this one all the proper messages. After a short time, the bobcat made an unhurried departure and, as it wended its way into the brush, I was struck by how perfectly its coat merged with sun-splotched vegetation. How many times, I wondered, had I gazed with unseeing eyes on such a cryptic creature?

I had not planned to track wild bobcats. The book contract I had signed with Viking Press called for quite a different approach to the subject. Bobcat kittens were about to be born at the Arizona-Sonora Desert Museum (a "museum" of living animals) at Tucson, and I had been granted permission to watch and document the litter from birth to adulthood.

None of my previous animal studies had been conducted in such comfortable circumstances. To observe and write about wild mustangs, I had raced with the herds across burning deserts; to study wild coyotes I had wintered in Yellowstone National Park (Smithsonian, November 1980), stomping about in polar conditions on snowshoes; and to write about the little deer of the Florida keys, I had sloshed through tangles of mangroves in swamps black with mosquitoes. Now, I planned to watch my subjects from a ringside seat.

But the litter I observed being born had not survived, and my well-laid plans had to be scuttled. Once again I set out into the wilderness, this time on the track of an animal that is a master of concealment.

Besides being well camouflaged, a bobcat hears sounds at a distance and, long before an approaching human hies into view, will slip into hiding. In time I was to observe this manifested by a California bobcat. While feeding on a road-killed rabbit I had dropped, the animal suddenly stood up in alarm. Though I could hear nothing, it dashed for cover. I did not understand until ten minutes later when a solitary hiker passed through.

That a bobcat would hide from a potential enemy is natural enought, yet at times I wondered if the animal was taking perverse pleasure in playing hide-and-seek with me. For, on a number of occasions, in retracing my steps out of some remote canyon or dusty wash, I discovered fresh cat prints on top of my incoming tracks. And, now and then, when the elusive bobcat did emerge and allow itself to be seen, it walked about with the confidence of a lion.

However capricious it seemed, the species' tendency to remain quietly unobtrusive is a behavioral adaptation that has helped it to survive through evolutionary history of some 40 million years. A bobcat must conceal itself to ambush prey, for it is not physically adapted to course long distances after rabbits, canine fashion. Its lightning-fast sprints soon fade as the animal becomes winded. So a bobcat hunkers down behind a rock or glides along silently, then takes its unsuspecting victim in a sudden rush.

The species is served in still another way by its reclusive nature. Bobcats are weakly social and prefer to avoid one another. Each cat occupies an area that is loosely delineated by the boundaries of its neighbors' home ranges. It is critical that the species space itself so as to assure each animal an adequate and renewable supply of rabbits, mice and other small game to feed upon. Its inherent avoidance of kind also spares the animal the risky need to do combat to protect its land claim.

Each cat sprays its own home range with small amounts of strong-smelling urine. Non-resident cats, seeking solitude themselves, turn away from these scent stations, while spraying their own haunts with "cat repellent."

In Florida I watched a bobcat do this. While going about the never-ending business of searching for prey, it deposited scent on conspicuous brush at frequent intervals and hardly paused to peform the act. A perfunctory "genuflect" and the selected leaf was targeted.

A bobcat, the female in particular, also will create visible evidence of its presence in an area by repeatedly defecating at some special, often elevated, site. That these pyramids of stools are purposeful constructions seems apparent from the fact that elsewhere the same bobcat will bury its excrement. In Idaho I found many such mounds. In every case these were located near dens where kittens had once been sheltered. Some contained scores of aging stools.

The amount of land an individual bobcat occupies varies from one part of the country to another. Bobcats in Idaho, where I spent the summer of 1978 tracking them, require considerably more space than do bobcats in Arizona, California or Florida, where I also observed the species.

In Idaho I spent time at the National Reactor Testing Station, where Theodore Bailey conducted outstanding bobcat research between 1969 and 1972. Using radio telemetry, he mapped the distribution of 17 adult cats that inhabited 250 square miles (648 square kilometers) of sage desert. One of the male cats he monitored occupied an impressive piece of this total area, its home range measuring 42 square miles (108 square kilometers). The smallest-sized polygon Bailey surveyed belonged to another male cat; it contained 2.5 square miles (6.5 square kilometers).

In central Arizona, biologist David Lawhead conductd similar research and found his study animals to be occupying significantly smaller home ranges. In Lawhead's study the average bobcat home range measured 2.68 square miles (6.94 square kilometers), not much more space than was used by Bailey's most land-deprived cat.

Other research confirms that Southern bobcats use less space than do Northern bobcats. One reason may be a greater prey density in the Sun Belt. Whatever the explanation, bobcats are most sparsely distributed across the northern states and, tragically, it is there that they are most heavily exploited. Cold climate produces thick coats, and the current vogue of long-haired "fun furs," coupled with a worldwide decline in spotted cats of many species has created an unprecedented run on the North American bobcat. Pelts, which before 1970 sold at fur auctions for under $20, in 1979 brought prices as high as $650.

That a single bobcat pelt should have acquired such monetary value confounds professional trappers. The fur is inferior—weak and brittle, it sheds easily. Moreover, it does not take dye well. In the past, bobcat was used almost exclusively for trim. Ironically, it was the passage of the Endangered Species Act in 1973 and the conclusion of an international agreement to regulate trade in endangered species (CITES) that created the market for bobcat fur. Representatives from 67 nations have since signed the CITES (Convention on International Trade in Endangered Species) Treaty. As a result, the luxurious pelts of the vanishing cheetah, leopard and ocelot became unobtainable. Furriers, unhappy over the loss of these marketable materials, wasted no time finding a substitute spotted fur—the North American bobcat. Eleven matched belly skins pieced together into a full-length coat and bearing the euphemistic label, "lynx cat" or "cat lynx," began to appear in fashion salons throughout Europe and in Japan. To a lesser degree these coats have been marketed in the United States. Here, however, people have shown some reluctance to pay the prices asked for the inferior fur—$8,000 and up!

Not so abroad, where an unaccountable taste for spotted fur persists. An estimated 80 to 90 percent of the yearly bobcat "take" is exported. As a result, prices have continued to escalate, as has interest in trapping. Once the province of a few old-timers, today housewives, teen-agers and retirees are trapping for dollars—and for sport.

If the bobcat were as difficult to trap as it is to observe, all this commercial pressure would likely present no threat to the species. The animal, however, is vulnerable to a leghold trap. Whereas a coyote will react with suspicion to any strange object it comes upon, the bobcat's feline nature compels it to investigate and play with a novel object. Even cats that have suffered the trauma of finding themselves snapped fast in a steel trap do not seem to profit from the lesson. Theodore Bailey, using padded and offset traps to catch and collar his study animals, made 103 captures, but obtained only 66 different animals. Thirty-seven times he found repeaters back in his sets.

In times past, before the bobcat's pelt became so valuable, trappers often expressed annoyance over the species' propensity for getting into sets baited to catch more valuable furbearers. Today some of these trappers are wondering why they are catching so few bobcats. In Idaho, A. W. Barnes, a veteran trapper of 50 years, voiced concern:

"They're overtrapped," he told me. "The price is too big. They don't propagate like coyotes, you know."

Barnes' knowledge of animals, gained from years in the field, is squarely consistent with scientific evidence. The bobcat's reproductive rate *is* low. According to data collected in Wyoming by Douglas Crowe, a female cat produces a single litter annually. By counting placental scars in carcasses, Crowe was able to establish the average number of embryos carried per litter to be 2.8. The number of stillbirths, resorptions and spontaneous abortions is not known, and so the number of kittens actually born would be lower.

THE MOTHER'S MATE IS NO HELP

Moreover, the bobcat's small family size does not guarantee its young a high rate of survival. At the Archbold Biological Station in central Florida, biologist Douglas Wassmer is in the process of collecting data on a bobcat population previously monitored by another biologist, Del Guenther. In 1978 one litter of three was known. By fall, all had died. In 1979 two litters were known. By winter only one kitten was known to have survived. In 1980 four litters were known. Of these, only four kittens survived their first nine months of life.

Besides being vulnerable to traps, kittens fall victim to viral diseases, internal parasites, scabies, infections, predation by dogs, road accidents, starvation and injury. The fact that a mother bobcat, unlike a coyote or wolf, receives no help from her mate in rearing her family probably explains why such a small litter size has evolved in the species. Hunting for food requires energy, as every meal must be stalked and captured. About three kittens probably defines the limit of her capacity to successfully feed her hard-working self and keep her young nourished.

Nor are these demands on the mother cat short-lived. Until kittens are nine or ten months old, they remain with their mother and "on the dole." At the Archbold Station, I watched a mother bobcat with three trailing adolescent kittens. Every day or so they shifted to a new location, thus giving relief to the rodent and lagomorph (hares and rabbits) population upon which they depended. At each new base, the young remained in the brush during most of the day while their mother made forays in search of food.

One evening as I was crashing through the vegetation in the wake of this stealthy hunter, I pushed aside a palmetto frond just in time to see her jump a young raccoon. In a split second she had that fierce fighter by the throat and, despite its writhing and thrashing, held it fast (p. 38). The cat calmly throttled its victim while fixing me with a steady gaze. When at last the raccoon ceased to struggle, she trotted off with it. I followed and observed how she towed the cumbersome load to a place where she had parked her young. When she delivered the food, I could hear the commotion inside the dense thicket of live oak and palmetto.

Although pouncing and stalking behavior is instinctive in young kittens, these maneuvers must be practiced. A mother bobcat, therefore, begins to deliver live mice to her young when they are a few weeks old. She carries this "training prey" in a soft mouth, then looks on with a detached air while her kittens chase and play with it.

The kittens quickly learn to anticipate and block the escape attempts of such "toys," but are slow learners when it comes to killing. Studies by German ethologist Paul Leyhausen demonstrate that in felids excitement must reach a certain intensity before the animal is able to inflict a killing bite. Human beings, viewing cat behavior in the light of human values, often condemn the animal for "tormenting" its prey. Sadism, however, plays no part in the cat's psychological makeup. The predatory performance is made up of a sequence of responses and the culminating act, the killing response, is simply not as easily released as are other components of the behavior. A good thing, too. Otherwise, litters of young bobcats might destroy one another during wild bouts of play.

A SCARCITY OF PREY, A SCARCITY OF KITTENS

With age and experience, of course, a wild cat learns that it must execute its victims promptly to avoid losing a meal. Half-grown bobcats nevertheless experience hunting failure and, even when food is delivered to them, they sometimes have difficulty getting at the meat. In California I watched a four-month-old kitten with a road-killed jackrabbit I dropped for it.

The excited kitten drooled and rolled on the carcass, but could not bite through the hide. Finally, the little bobcat curled up with the intact rabbit, clutching it like a teddy bear, and took a nap (p. 41). Later I watched an older bobcat open such a carcass. Before slicing through the hide with its sharp teeth, it plucked a wide band of fur from the victim's back.

Though a bobcat will feed on a variety of small game, a number of studies indicate that hare or rabbit is preferred, where available. And long before a kitten is able to bring down this conveted prey, its fate is linked to the cyclical fluctuations normal to rabbit populations. In 1971 Idaho's lagomorphs declined. By fall Theodore Bailey was unable to locate a single kitten in the bobcat population he was studying. His adult subjects fared better. Bailey theorized that during periods of rabbit scarcity, a mother bobcat may be forced to range so far in search of prey that her own energy needs compel her to eat whatever she does catch. Her undernourished kittens soon become vulnerable to death from a variety of causes.

Unaccountably, since 1971 lagomorphs have been slow to make a comeback in Idaho. The Idaho Department of Fish and Game argues that the state's bobcat decline is as much a result of this rabbit depression as a trapping pressure. The two factors operating together could prove fatal to the bobcat population.

Recent research published in the *Journal of Wildlife Management* shows that trapping pressure can have a significant impact on a cat population. In a study of the bobcat's nearest relative, the Canada lynx, investigators Christopher J. Branch and Lloyd B. Keith demonstrated that in certain places where trapping proceeds during periods of snowshoe hare scarcity, afterward the lynx may not make a complete comeback. A few such cycles and the lynx may be exterminated from that part of its range.

In effect, this study challenges a long-standing wildlife management assumption that trapping is always "compensatory"—meaning that, where trapping is banned, other causes of death come into play to reduce the species to an equivalent level. Branch and Keith show trapping mortality may be "additive" during years when snowshoe hares are in short supply, and urge that trapping of lynx be curtailed at that time.

What has proved true for the lynx and the hare is likely to prove true for bobcats and rabbits. Little is known of how predator populations respond to the unnatural condition of being preyed upon. The bobcat's inability to adjust its litter size to compensate for "harvesting" sets it apart from certain prey species such as deer, mice and rabbits which will respond to a reduction in their overall population by producing larger numbers of offspring. That a bobcat's litter size is not similarly responsive to population changes can be deduced from placental scar counts made in four states where bobcat density differs.

Yet, in the face of these and other indications of the animal's inability to sustain heavy predation and without regard to what has befallen other species of North American wild cats, exploitation continues. Seven wild felids once existed on American soil. Today the jaguar is extinct within our borders. The ocelot, the jaguarundi and the margay are rare. The cougar or mountain lion today is regarded as viable only in a few regions of the West and, perhaps, Florida. And the lynx, whose range borders Canada, has decreased to the vanishing point in New England and Wisconsin.

While the bobcat is faring better, its range, which formerly encompassed 48 states, has been drastically reduced. Throughout wide swaths of the Midwest and the East, the animal is virtually absent. In New Jersey the bobcat is all but extinct and efforts are being made to restock it. Indiana, Iowa, Ohio and Delaware call it "endangered," while Illinois terms its "threatened." In Kentucky, Pennsylvania, Rhode Island and Maryland numbers are so low that the animal is given total protection. In others it has partial protection.

Many other states, too, impressed by the animal's sudden worth, have elevated the species from the status of "varmint" to that of "furbearer" and now set seasons when it may be trapped. Of the states where bobcats are trapped, only nine have imposed a bag limit and none has placed a limit on licenses sold. Hence the number of licensed trappers goes up each year and between 1979 and 1980 leaped by 21 percent.

In 1977 the federal government acted to slow down the exploitation. The Endangered Species Scientific Authority (ESSA), a federal panel charged with the task of monitoring the status of species listed in the CITES treaty, announced a ban on the export of bobcat pelts. The bobcat is defined in the appendix of that international agreement not as endangered, but as likely to become so if subjected to uncontrolled international trade. The treaty stipulates that, unless evidence proves export has not harmful impact on an animal so listed, export must be prohibited.

For a brief period, it appeared that a mechanism was in place to dampen bobcat trapping. But within a few months, ESSA reversed its stand by setting generous export quotas on bobcat pelts taken from states willing to institute a tagging program. The following year, ESSA went even further, approving unlimited export for the states that had tagging programs in operation.

Some conservation groups objected, but the game departments, represented by the International Association of Fish and Wildlife Agencies (IAFWA), argued that the bobcat did not deserve to be put into the "threatended species" category. IAFWA reiterated its traditional position that authority over wildlife should reside entirely with the states.

The conflict landed in court. In 1979 Defenders of Wildlife filed suit, charging ESSA with failure to implement the CITES treaty. The Defenders argued that ESSA's data on bobcat populations, obtained from the states, failed to prove its case that export was not harming the species. Supporting ESSA in court was the Fur Conservation Institute of America, 11 private fur and trapper organizations and the state game agencies as represented by IAFWA.

Because only four days were allowed for the trial, Defenders of Wildlife was not able to present its state-by-state analysis of the bobcat situation. But Judge June Green awarded the conservation group a limited victory, ordering a total or partial ban on bobcat export from seven of the nine states whose data she did hear reviewed.

Defenders was not satisfied and took the case to a higher court. In February of 1981 (two years and perhaps a quarter of a million dead bobcats later), the U.S. Court of Appeals issued its findings. The biological standards used by ESSA to authorize bobcat exports, the court said, were "inadequate" and "should be set aside." Moreover, 26 states and the Navajo Nation were improperly dismissed from consideration at trial. The case has been remanded to the lower court with instructions to favor the protection of the animal where doubt exists.

Attorneys for the fur and trapping interests, together with IAFWA, have announced their intention of carrying the case to the U.S. Supreme Court. Meanwhile, ESSA has been superseded by the International Convention Advisory Commission; this new panel has recommended that a proposal be sent to the 67 party nations to CITES that the bobcat no longer be listed in the treaty.

Although it is not hard to understand the position taken by the trapper-fur interests, one must wonder at the reluctance of wildlife professionals to grant relief to an animal population about which so little is understood. The issue, however, is only partly a biological one. What is at stake is not just bobcats, but the authority of the state wildlife management establishment.

Traditionally, the states financed their wildlife programs exclusively through the sale of hunting, fishing and trapping licenses and a tax on ammunition. Thus whatever might have been the private views of individual employees, the fish and game agencies were asked to answer to a hunting-fishing-trapping constituency.

Gradually, however, this has been changing. A few state agencies have been accepting financial and philosophical input from "nonconsuming" nature lovers who perceive wildlife as possessing an intrinsic legitimacy, unrelated to economic profit. Other states still evaluate wildlife in terms of exploitable and nonexploitable elements (*i.e.* "harvest species," "varmints," "game animals," "depredators," "trophy species," "competitors," "furbearers," and so forth).

Meanwhile the bobcat continues to work out its private destiny in places few people visit. Only on the backs of the fashionable does it put in an appearance. Inevitably, of course, the demand for its spotted coat will pass; even buffalo robes were once popular. In the end, those scraggly hides were packed away in attic trunks, though not before the teeming herds of native beasts that had produced them were gone. The demise of the bobcat would not be so noticeable an event. Few people are privileged to see a wild bobcat.

ENDANGERED SPECIES ACT OVERSIGHT

THURSDAY, DECEMBER 10, 1981

U.S. SENATE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
SUBCOMMITTEE ON ENVIRONMENTAL POLLUTION,
Washington, D.C.

The subcommittee met at 9:55 a.m.; in room 4200, Dirksen Senate Office Building, Hon. John H. Chafee (chairman) presiding.

Present: Senators Stafford, Chafee, and Mitchell.

OPENING STATEMENT OF HON. JOHN H. CHAFEE, U.S. SENATOR FROM THE STATE OF RHODE ISLAND

Senator **CHAFEE**. Good morning ladies and gentlemen. We apologize for starting a little late this morning.

We are delighted that the distinguished chairman of the full committee is here today.

This is, as you know, the second day of oversight hearings on the Endangered Species Act of 1973. These hearings begin the reauthorization process which must be completed by October 1, 1982.

In my opening remarks the other day, our first day of hearings, I referred to a statement made by James L. Buckley, Undersecretary of State, for Security Assistance, Science and Technology, at the November 16, 1981 Strategy Conference on Biological Diversity convened by the State Department. A complete copy of Mr. Buckley's remarks will be included in this hearing record. (See p. 305.)

Anticipating some of the testimony we will hear today from a panel of distinguished scientists, I would also like to have a copy of an editorial that appeared in the Washington Post this past Monday printed in the record. (See p. 310.) The editorial reports the creation of a new bacterium that is capable of metabolizing a toxic herbicide. Such feats of genetic engineering illustrate why it is so important to stop the world's accelerating loss of species.

The testimony we received at Tuesday's hearing was extremely helpful. It was factual and specific. The point I made in my opening remarks then repeating.

Those of you with reasonable concerns and problems with the act, as written, or as implemented, let us hear from you. We will do what we can.

But as I mentioned the other day, generalized statements of fear as to what the act can or cannot do, or might or might not do, fear as to how the act may be used in a particular situation are not helpful.

As we mentioned the other day, this is not a new piece of legislation. The act has been around in substantially its current form since 1973. We have had more than 8 years experience with the act by now.

Experience teaches us where changes in the law are needed. Generalized statements of fear or hypothetical situations do not.

If you have problems, document them. It is time we raised the level of debate about this law to the arena of facts and intellectually honest discussion. Too often the debate has centered around agruments based on emotionalism and undocumented fear.

Without denigrating any of our fine witnesses who have agreed to testify today, I do want to express regret that more representatives of industry's interests could not accept our invitation to testify. I understand that they have promised to submit testimony, and I would urge them to do so at the earliest date they can, but in no case later than January 8. Of course, personal appearances are preferable to the submission of testimony because live testimony means that the committee gets a chance to ask questions.

We need your comments and suggestions in time to consider them prior to drafting a reauthorization bill. Our plan is to begin the drafting process in January.

As I mentioned earlier, we are delighted the chairman of the full committee is here. With his busy schedule, I understand, Senator Stafford, you won't be able to stay, but if you have an opening statement or comments we would be delighted to hear them at this time.

Senator STAFFORD. Thank you, Mr. Chairman, I don't have an opening statement.

I think these hearings are very important and the legislation the committee will be asked to write next year is also very important.

Listening to your comment on the gnenetic engineering, it occurred to me in passing, if the scientists could develop a bacterium to consume our national debt we would be a lot happier.

Senator CHAFEE. Well, we have learned recently from the AEI that the national debt is really not such a problem.

Senator STAFFORD. Not to them.

Senator CHAFEE. We have got to change our Republican philosophy, I understand, that debts are no longer very serious matters, at least deficits.

Now we will proceed with our first panel, Mr. Craig Bell, executive director, Western States Water Council, and Dr. James Tate, Western Regional Council.

Please come forward gentlemen, and we have your statements which will obviously go into the record.

Rather than reading them, perhaps you could summarize them. We will have to have a 5-minute limitation on each of the witnesses because we want to give each witness a fair shot. I see that Dr. Stephen Kellert is the last witness for this morning, and I want to make sure that he gets just as much time as the first witness.

So won't you proceed, Mr. Bell.

STATEMENTS OF CRAIG BELL, EXECUTIVE DIRECTOR, WESTERN STATES WATER COUNCIL, AND JAMES TATE, WESTERN REGIONAL COUNCIL

Mr. **Bell**. Thank you. I appreciate the opportunity to testify on behalf of the Western States Water Council. The council consists of representatives appointed by the Governors of 12 Western States, and my intention is to communicate the position of the council on this issue.

The council has considered the present administration of the Endangered Species Act. While recognizing the value to the Nation of protecting our endangered and threatened species, various member States of the council have experienced serious problems with the act which demonstrate critical flaws that we believe will require legislative and admini*BAD MAG TAPE**ERR01*strative remedies.

Specifically, the Endangered Species Act, as previously constructed and implemented, has in several cases thwarted effective State water resource development, and threatens to continue to do so in the future even as the Western States' limited water resources become increasingly important in meeting essential national needs. So we hope that the Congress and this subcommittee will carefully reconsider and evaluate the provisions of the act, and hopefully will make it more effective and efficient in more effectively meeting expressed national goals.

First of all regarding congressional purposes, as you know, the Supreme Court in *TVA* v. *Hill* said that the legislative intent of Congress in enacting the Endangered Species Act of 1973 was to halt and reverse the trends toward species extinction, whatever the cost. Congress evidently disagreed, and subsequently enacted amendments intended to provide the flexibility necessary to allow a balancing of endangered species values with other national needs. However, we submit those only partially provided the needed flexibility.

We would recommend that congressional purpose and policy be redefined explicitly in section 2 to state that the conservation of endangered species should not automatically be undertaken at all costs, but should be considered in concert with other national goals.

Delay and uncertainty with respect to the listing of species and designation of critical habitat have significant economic impacts which need to be more fully addressed by the act. Further, such actions have been criticized in the past as based on political rather than scientific factors. Also a forum should be established wherein conflicts over judgments with respect to biological facts can be challenged and resolved. Adjustments could easily be made under the present promulgation process at such time as more accurate information became available. The 2 year time period provided between ijitial notice of a proposed listing and final publication of regulations should be reduced. Critical habitat should be designated by the secretary only after providing ample opportunities for official state comment by the respective Governor. Such designations should also follow the required economic impact statement.

Regarding recovery, the act provides that endangered or threatened species be protected from such natural factors as disease or predation. I think we need to realize that the complete conservation of all endangered species is not physically or economically practicable. Therefore, some priortization of recovery efforts is necessary within national fiscal constraints. The act presupposes that there is a significant correlation between the protection of natural ecosystems and the conservation of endangered species. Such a correlation is unproven. Prior to making large investments in potentially expensive conservation efforts, such as land acquisition, other alternatives need to be considered.

Another point important to the Western States Water Council is the conflict between the act and the development of Western water resources. We submit that contrary to congressional intent, as evidenced in a number of laws, the Endangered Species Act has been used in the past to directly abrogate the supremacy of State water laws. For example, the Fish and Wildlife Service is presently using the act in the Colorado River Basin to mandate instream flows, irrespective of the biological needs of endangered species.

We would strongly recommend that Congress specifically address this growing tendency on the part of Federal agencies to use environmental statutes as a means to allocate water. The act should be amended to expressly state that the act will not be used to allocate water, but such allocation will be accomplished under State laws.

We believe that the jeopardy opinion offered by the Fish and Wildlife Service has been sometimes routinely delayed through automatic extension of the consultation process. When finally rendered, such opinions have sometimes in the past lacked factual content and have superficially addressed reasonable and prudent project alternatives.

We submit they should be promptly submitted within the 90-day statutory limit, except as mutually agreed by the agencies and relevant non-Federal interests. Again they should be based on readily available information and a forum should be provided wherein the findings can be assessed and challenged, leading to resolutions of the differences of opinion on the scientific facts and judgments.

The same is true with biological assessments. They have suffered from the same problems. They are often unreasonably delayed, and professional judgments leave room for reasonable disagreement. Again some forum should be provided where differences in professional judgments could be resolved. However, such assessments must be promptly completed within a 6-month statutory period.

Finally, we submit the exemption process has not provided the flexibility and balance between environmental and economic values which Congress intended. The exemption process is perceived as time-consuming, imprecise and rather than facilitate, may frustrate beneficial development.

We submit Congress should explicitly state that consideration of exemptions should take place after meaningful consultation, within the statutory time period, has failed to resolve conflicts between the values established by the act and project purposes. The exemptions should not be considered as a matter of last resort following protracted and meaningless discussion within a clouded context of differing interests, or after a particular project's compatibility with all other statutory requirements has been determined.

In conclusion my statement suggests that the exemption procedure in our view has failed to meet its objective, and that Congress should explicitly state that consideration of exemption should take place after a meaningful consultation within the statutory time period has failed to resolve conflict between the values established by the act and project purposes.

The exemption should not be considered as a matter of last resort following protracted and meaningless discussion within a clouded context of differing interests, or after a particular project's compatibility with all other statutory requirements has been determined. Rather than delay decisions, the process should facilitate timely conflict resolution. To accomplish this objective the process needs to be more clearly defined and shortened to a reasonable period of time.

That concludes the summary of my statement.

Senator CHAFEE. What I am going to do is, I will ask you questions after we finish with Dr. Tate's statement.

Please proceed, Doctor.

STATEMENT OF JAMES TATE

Dr. TATE. Thank you, Mr. Chairman.

I am here on behalf of a group of western business and industrial concerns called the Western Regional Council, and I think we are here to respond to some of your specific needs as you asked for them in this testimony, namely, I hope to present to you specific cases where there have been serious conflicts in the Intermountain West with the Endangered Species Act.

In order to do that, I want to tell you I come from a technical background. I am an ecologist for ARCO Coal Co. and a past associate professor at Cornell University and assistant director at Cornell's Laboratory of Ornithology. I have worked for the National Audubon Society and served in advisory roles to the Nature Conservancy and other conservation organizations.

My testimony on behalf of the industry is for the Western Regional Council, which is a unified voice for the business community in the Intermountain West. We represent the States of Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming.

Senator CHAFEE. Excuse me, but you don't represent the States?

Dr. TATE. The council represents industry and business in those States, it is a group of about 50 business organizations.

I want you to know we are here today to support the basic concepts under the act, but also I want you to know that the act has worked very much against our national goals as it affects business interests.

We think that the Endangered Species Act is a western regional issue. There is, in my more detailed testimony, figures that show the number of endangered species in the West, clearly identifying this as a western issue.

I have here, and in my written testimony also, a number of case histories which have not received as much publicity as some of the cases you may have heard about. I believe that these, and numerous other examples in the Rocky Mountain West, show that projects were slowed at great costs, and sometimes stopped, through the inappropriate application of the Endangered Species Act.

I wish to comment on four areas in the act, the critical habitat concept; the lack of protection for parties who attempt to apply experimental management techniques to endangered species; the act's interaction with western State water law; and the consultation provisions of section 7. At this time we can't really give you specific amendments and proposals, but I do want to bring to your attention these problems and hope that you will support them.

Identifying critical habitat for an endangered or threatened species makes sense. Presumably it would allow the industry to decide where they are going to go and not go in a proposed development, but the implementation of this provision of the act has been unsatisfactory. The Department of Interior has failed to designate critical habitats or has been slow to do so, due to lack of personnel and funding. The Department of Interior has, in our opinion, failed to designate critical habitat. In most cases it has identified a range, a geographic area in which the species may exist. There is a case history attached to my testimony dealing with Bastrop County, Tex. In this case the range that was designated for the species had no effect on the studies that were done for the BLM/EIS. Instead, the critical range was merely a barrier to the free choice of sites, locations and developments. It is our opinion that the existing regulations require changes to bring them in line with the concept of critical habitat rather than a critical range for a species.

The introduction of experimental population has become a common practice in biological sciences in order to manipulate species instead of placing species in a reserve where they would be protected from the activities of man. This is a modern view of biology and a reasonable one.

The case of the peregrine falcon in Atlantic Richfield's property in western Colorado is a case in point. Atlantic Richfield was asked to place some hand reared falcons in a mountain stream valley suited to the species. Among the other considerations of whether or not to go ahead and try to do something for this species, the company decided that no assurances could be found that the successful introduction of the species into this locality would not constitute a violation of the act by the continued operation of company facilities already in place.

We believe categories of experimental populations should be added to the Endangered Species Act, allowing innovative experimental techniques that would allow a project to continue should the experimentation be successful.

Western water rights have been discussed in prior testimony. The conflicts between western water rights and the Endangered Species Act are of great concern to the Western Regional Council.

Both cases involving western water law which are mentioned in my testimony deal with whooping cranes and their critical habitat in central Nebraska, the Grayrocks case and the Wildcat Creek Reservoir case. In both of these cases western water law has been ignored. In both cases, the U.S. Fish and Wildlife Service has appropriated water and obtained water rights through the Endangered Species Act, contrary to the needs of the people in the Western States involved. The fact that, in both cases, the endangered species' critical habitat was 350 miles downstream and located in another State affected by a variety of compacts and other water law concerns was not a consideration when the FWS applied the Endangered Species Act.

The section 7 consultation process affects the majority of projects in the Intermountain West. We believe the steps in the consultation process are not well defined. We believe the process should be adaptive and it does not appear to be adaptive. We believe the process should be timely and it is far from timely.

Each of these points are indicated in the ASARCO development in the Cabinet Mountain Wilderness in northwestern Montana. We believe the provision of section 7 should be limited to major Federal actions. We believe that section 7 consultation should apply to significant portions of the critical habitat of the species, not to a small amount of acreage in the midst of a large wilderness area. We believe three serious constraints, all dealing with the grizzly bear, have been placed on this company in its attempt to explore for mineralization. The Endangered Species Act was used in this case to slow or prevent this development. The costs of this delay to the company has reached well into the six figures.

In our opinion, these actions do not go one step toward conserving or protecting an endangered species. We believe the abuses of the act, through the section 7 provisions, adversely affect industry and we are willing to provide you with other case studies which delineate these problems.

I hope that you will consider the views of the Western Regional Council in 1982 when the Congress considers the reauthorization of the Endangered Species Act. In the meantime, the council is more than willing to assist your subcommittee in its endeavors.

Thank you.

Senator **Chafee**. Thank you very much, Dr. Tate, for your testimony.

The point you made about the reintroduction, or the introduction of endangered species, so-called experimental populations, point two, was a point raised the other day by Mr. Huey from the State wildlife agency in New Mexico. I think it is a very valid point—something should be done, as you noted. In many instances, the process defeats what we are trying to do; we are discouraging people from taking a chance on the reintroduction of an experimental population of endangered species. Such reintroduction and recovery are two of the goals of the act, obviously.

Hopefully, we can accomplish something there.

You cited difficulties under section 7. We had testimony the other day dealing with section 7 from the National Wildlife Federation. This is what they said:

> Section 7 requires that Fish and Wildlife Service issue an opinion within 90 days after initiation of formal consultation. A complaint frequently aired is that the consultation agencies are not complying with this time restriction. This is clearly not the case. We examined the more than 600 opinions issued between 1979 and 1981 by the Fish and Wildlife Service to determine the average consultation time for opinion. The results of this analysis show that, Fish and Wildlife was well within the 90 day limit with an average of 78 days per opinion.

The preparation of some opinions did exceed the 90-day period but this was infrequent and usually occurred where extensions had been mutually agreed to by FWS and the Action agency. Thus FWS records demonstrate that consultation has not delayed Federal projects. Calls to amend section 7 because a few projects have been delayed should be viewed with skepticism.

Now, could you comment on that?

Dr. TATE. One case history on that subject that the WRC has been able to document is the ASARCO case in the Cabinet Mountain in northwestern Montana.

We need to understand in this case that due to the northwestern Montana weather conditions, the normal drilling season is only about 5 months. Since the company was already under an exploration program which required helicopter equipment and so forth, there was considerable cost related to every delay.

To answer you directly, in February 1979, well in advance of its drilling season of 1979, the company approached the Fish and Wildlife Service and the Fish and Wildlife Service assured ASARCO they expected to be completed with this process of application by June. The fact is, the Fish and Wildlife Service in Billings had to submit the material to their Denver office; they had to take other submittals. ASARCO didn't receive approval until September 1, which was an 8-month period which destroyed their ability to explore in the 1979 season. ASARCO had to totally reconsider its program in 1980.

Senator CHAFEE. That delay was in no way by agreement with your company, ASARCO?

Dr. TATE. No; this company was quite concerned about the delay because ASARCO was incurring costs for its pre-contract to drillers that was running to five figures on a daily basis. You can't get going rates on an as-called basis, I am afraid.

Senator CHAFEE. But you are saying this delay was not by any agreement?

Dr. TATE. No, it was not.

Senator CHAFEE. You indicated in your remarks that the council will try to come forward with some specific amendments; is that correct?

Dr. TATE. We would like to, but because of the time constraints we were not able to do so at this time.

Senator CHAFEE. Well, if you could do your best on that, that would be helpful to us, and obviously you indicated that you would like an opportunity to testify in 1982 when we come up for a reauthorization; of course, you will be given that opportunity. Stay in touch with the staff, and these people have a point to be here—no question about it.

Let me just say something about your statistics about the West and the endangered species being there.

That is true; I don't question your statistics. I think you say 61 percent of those listed so far are in the West—west of the Mississippi—and it is true there are delays.

At the same time, I would point out we are dealing with something very finite here, an endangered species is endangered by its very terminology, and when it is gone, if indeed it is, and that has happened, why it is gone.

So while there might be some dollar costs on occasion, and I don't deny that, the word constantly used by industrial groups is "balance," and I understand that. But there is balance. Balance works two ways. There is a balance here in which we have to weigh the specifics that are being engaged against the cost that incurred from the delay, and sometimes the costs will just have to be there.

Now, I think the points you make are good ones, if we are going to designate habitat, let's have enough people to do it. Whatever struggles we have had on that in the past are probably minor compared to those we will have in the future judging on what is happening now on the domestic side of the budget.

Have you ever been to the exemption committee?

Dr. TATE. Have I?

Senator CHAFEE. I mean any of your groups, have they ever gone that far?

Dr. TATE. I don't know of any case where the companies that we represent have been through that process. It is the feeling of our companies that it is not a process we want to enter into because of the complexity and difficulty of achieving decisions.

Senator CHAFEE. Mr. Bell, on page 4 of your statement, at the bottom, you talk about the jeopardy opinion, and you say:

> The Secretary's opinion, rendered by the Fish and Wildlife Service as to the potential jeopardy or lack thereof due to an agency's proposed actions, has been routinely delayed by automatic extension of the consultation process.

You heard the data we cited from Fish and Wildlife, or the Natural Wildlife Federation testimony on Tuesday.

Mr. BELL. Yes, sir.

Senator CHAFEE. Could you amplify on your point there?

Mr. BELL. I think the point is that there has been informal consultation taking place, not the formal consultation called for by the act, but informal consultation between the Fish and Wildlife Service and the affected parties, and when the affected parties move for a decision, they are confronted with the very real possibility that they will receive a jeopardy opinion if they force action and a decision.

Therefore, reluctantly they agree to an extension of the informal consultation process, rather than start the formal mechanism to issue a jeopardy or nonjeopardy——

Senator CHAFEE. But they did agree, though?

Mr. BELL. Yes, they did, after.

Senator CHAFEE. Somehow the impression is given that these agreements are always with a gun at your head in some fashion. Is that your implication?

Mr. BELL. Well, to some extent I think that is true. Partially because of the point that Dr. Tate made. The exemption process is not seen as an effective procedure for conflict resolution, therefore you want to tend to work at the lower levels to see if something can be worked out.

So, rather than force a decision, you take a chance of working with Fish and Wildlife Service in the hope if you work with them long enough you will avoid jeopardy.

Senator CHAFEE. Dr. Tate, your credentials are pretty good in the Wildlife and Environmental area, and not that Mr. Bell's aren't, I am not making that comparison; but you worked in the Ornithology Laboratory at Cornell, and you have been with the Audubon Society and so forth.

If you had your druthers, what would you do with this act?

Dr. **Tate**. I am speaking for the council and myself as a biologist. I do not believe either of the two represented would say the act should be gutted or revoked. However, I would very seriously look at the consultation process.

Senator **Chafee**. You are a scientist. We had testimony the other day which said that in trying to designate habitat, you get three or four scientists together and they will come up with three or four different designations.

These things are not subject to completely objective analysis. There is subjective consideration coming in. Who can say what is a grizzly bear's habitat? It gets difficult.

The problem, as I see it, is that when you are dealing with a thing called an endangered species, you have got to err on the side of preserving it or attempting to do so, and you cannot move as rapidly as ARCO would like you to believe. People in ARCO are high powered, efficiency people and when they make a decision they want to carry it out; but that is not the way we can proceed in these matters.

Dr. **Tate**. May I use your grizzly bear example you mentioned?

Senator **Chafee**. Fine.

Dr. **Tate**. In the case before us we were talking about a claim group block of fewer than 1,200 acres in a wilderness area of many hundreds of thousands of acres. Within that entire wilderness area the grizzly bear evidence, based on several scientist's opinions over 29 years, had never shown that the grizzly bears occurred in an area where this mining claim block occurred. Even the hiring of a specialist, did not show that grizzly bears were in that area. In addition to that, this particular company found itself with a deadline of December 1983 after which its mining claims would no longer be any good.

It appeared to them, I believe, that in this case, the Endangered Species Act was called upon as one more way of slowing ASARCO's progress by forcing the company to miss the 5-month drilling season year after year until it was no longer a problem, all in the name of endangered species, which was not benefited by these actions one way or the other.

Senator **Chafee**. You are saying this is a complete phony? You said several scientists indicated they found no evidence of grizzly bears. Were there several on the other side that did?

Dr. **Tate**. No, there were not.

Senator **Chafee**. In that case you cited it seems like an abuse of the authority by Fish and Wildlife, but I am not going to make that decision, because I do not know Fish and Wildlife's side of the story.

Thank you very much gentlemen, we appreciate your coming here today, and we look forward Dr. Tate to further thoughts from you, and Mr. Bell also.

Let me just ask one question before you leave. Regarding the State and water rights, I think Mr. Bell spoke on that most. Are you asking for a statutory exemption? I am not sure what you are asking for in connection with those water rights.

Mr. **Bell**. Well, we have not worked that out in specifics, unfortunately. We hope to do that. We believe that there needs to be some expression of congressional policy, that the Endangered Species Act should not be used to allocate water resources in the West, which the Congress has always recognized as a State prerogative.

We think Congress needs to address that. We are not necessarily calling for a specific exemption, but nevertheless Fish and Wildlife should not be allocating western water resources——

Senator **Chafee**. Are you suggesting they are using this act to allocate water?

Mr. **Bell**. I am suggesting——

Senator **Chafee**. That is a pretty tough suggestion, that goes along the line of the suggestion of Dr. Tate that they are using this act in order to prevent the drilling to take place—where was that, in a wilderness area?

Dr. **Tate**. Yes.

Senator **Chafee**. Before 1983.

Mr. **Bell**. I am suggesting that is being accomplished, or has been accomplished under the Endangered Species Act. I have some case histories which I have provided to the staff, and I would encourage your review of those cases in making your own independent judgment, but that is our feeling, Senator.

Senator **Chafee**. Thank you.

Senator Mitchell, we welcome you. Do you have a statement?

Senator **Mitchell**. No.

Senator **Chafee**. Our next panel, Mr. Kenneth Berlin and Mr. Michael Bean.

Mr. Berlin, welcome, glad to see you again.

Mr. **Berlin**. Thank you.

We would like to begin with Mr. Bean's testimony.

Senator **Chafee**. Go ahead.

STATEMENTS OF MICHAEL BEAN, COUNSEL, ENVIRONMENTAL DEFENSE FUND; AND KENNETH BERLIN, COUNSEL, LEGISLATIVE DIRECTOR, WILDLIFE PROGRAMS, NATIONAL AUDUBON SOCIETY

Mr. **Bean**. I am Micheal Bean, chairman of the wildlife program of the Environmental Defense Fund. I testify today on behalf of the dozen organizations identified in my written statement as well as the Sierra Club.

The Endangered Species Act is very important to us. We appreciate the very strong support you and Senator Mitchell voiced for the act on Tuesday.

The effectiveness of the act is important to us and to all conservationists, because its goal is fundamental to every conservation effort. That goal is to preserve future options for human welfare by preventing the loss of, and restoring to a secure status, the life forms whose chemical properties have been shaped by a myriad of forces over the millenia. My statement amplifies upon 11 basic principles which we think should be adhered to by Congress in reauthorizing this act.

The first of these is that the act should be available, not just for mammals, birds, and other so-called higher life forms, but for the full range of plant and animal life. As the testimony of the scientists who follow will show, some of the most innocuous forms of life may offer the greatest material benefits to mankind. Accordingly, we urge you to reject the suggestion that such species are less important for us to conserve.

Our second objective is that the act provide an efficient and expeditious means of listing species that are in fact endangered or threatened, and that those listings be based on objective evaluations of their biological status, not on political or economic considerations.

As my written statement describes, we believe that since the amendments to this act in 1978, and indeed because of those amendments, the listing process has been neither efficient or expeditious. In his testimony Tuesday, Fish and Wildlife Service Director Robert Jantzen stated: "Since 1978 we have listed a total of 148 species."

That may have given you the impression that the listing process is moving along quite smoothly. It is not.

I will illustrate how badly the process is in fact functioning by using Mr. Jantzen's figure of 148 species listed since 1978.

That figure apparently includes 1978 listings prior to the November enactment of the 1978 amendments. Excluding those yields a figure of only 135 species listed since the 1978 amendments.

Of those, 41 belong to a single genus of snails that was proposed to be listed—and listed—as a single unit. Incidentally, though included in Mr. Jantzen's total, 19 of those 41 were presumed already extinct by the Fish and Wildlife Service at the time of their listing.

If we treat the listing of that 1 genus as 1 listing and not 41, then the total shrinks to 95 listings since the 1978 amendments. Of these, 83 had already been proposed for listing prior to the 1978 amendments.

Thus, in the more than 3 years since the 1978 amendments, only 12 species have been listed for which formal proposals were not already outstanding prior to those amendments. Two of those listings were temporary, through the emergency listing process rather than the regular process; both have now expired.

That leaves 10. Of these, eight pertain to foreign species for which no critical habitats were determined. The others were a single species of plant and the genus of Hawaiian snails, I believe referred to. Critical habitat was designated only for the plant. Thus, this one species of plant is the only species that has been both originally proposed for listing, and listed with critical habitat, pursuant to the nonemergency rule making procedures of the 1978 amendments in the past 3 years.

I would add with respect to that plant that it is unlikely its listing will ever adversely affect any commercial interest since it is found only in the White Sands Missle Range of New Mexico.

Nevertheless, the listing of this species and the Hawaiian snails I referred to, occurred only after the Environmental Defense Fund gave formal notice, pursuant to the citizen suit provision of the Endangered Species Act, that it would sue Secretary Watt if he did not make these listings effective.

That is a bad record, and it is not made much brighter by focusing on the 83 species listed from among those originally proposed for listing prior to the 1978 amendments.

At the time of those amendments, there were over 2,000 species listing proposals that were then pending; 83 of those 2,000 have now been listed. The remainder were withdrawn because the new listing procedures could not be complied with within the time limits fixed by the act.

In an overall bad record, the record of the current administration is particularly miserable. It has yet to propose a single new listing, nor has it finalized any of the proposals outstanding when it assumed office.

I submit that the 1978 amendments to section 4 of the act, though based in part on a General Accounting Office report which criticized the Fish and Wildlife Service for allowing economic, and therefore political, considerations to influence listing decisions, actually make the listing process more vulnerable to those pressures. An administration which is more responsive to those pressures than to the biological needs of species will list few, if any, species, as this administration has done.

The third set of objectives pertains to the important role that States can play here. In 1973 Congress declared encouraging States to develop and maintain conservation programs through Federal financial assistance was key to safeguarding the Nation's heritage in fish and wildlife. The Congress was right. The role of the States was key then and it remains so today, yet the assistance to encourage the States to fulfill that role has dried up.

For the States to develop long-term conservation programs, they cannot be faced with a roller coaster of Federal assistance. While I realize that neither you nor anyone else can guarantee a fixed level of assistance, it may be possible, as the States requested Tuesday, to provide a reasonable cushion against the peaks and valleys of the budget by linking the money available to assist the States to the overall level of appropriations. We encourage you to explore that and thus assure a real partnership.

Senator **Chafee**. Were you surprised that the amount of money that was going to the States under the act was so modest and, therefore, the question really arose whether the amount was so significant that the States would stop doing whatever they were doing because of the withdrawal of the Federal funds?

Mr. **Bean**. The significance of the Federal contribution varies from State to State. I think most States are prepared to continue some effort on their own, and in many cases that will be a significant effort whether or not Federal assistance is available. But to expect the States to plan long-term programs, they have to have some reasonable certainty of continuity of funding in the future, and without that reasonable certainty they are unlikely to be very innovative or comprehensive in their programs, but plan instead only for that level of activity they can support from their own sources of funding.

Senator **Chafee**. I think the testimony was that the money for New Mexico was $30,000 for example. On a 50-50 basis, it is somewhat of an incentive, but obviously the program in that State is modest—maybe it is more in other States.

Mr. **Bean**. It is a good deal more in other States. I don't have those figures, I will be happy to obtain them for you.

Senator **Chafee**. I don't think we want to put the burden on you. If we can't obtain them we are in tough shape.

Go ahead.

Mr. **Bean**. Thank you, sir.

Several of our objectives relate to the duties imposed by section 7 of the act. That is without question the most important provision in this act. The amendment proposed on Tuesday by Mr. Boynton would eviscerate this provision by turning back the clock some 15 years to a purely hortatory standard already tried and proven ineffective in the 1966 Endangered Species Preservation Act.

I won't say more about section 7 now because it is addressed in my written statement and will also be addressed by Mr. Berlin.

In the interest of time, I would rest upon my written statement as far as remaining principles are concerned except for one. There is, as I think you know, enormous citizen interest in this act and in the implementation of this act.

The act recognizes that interest by providing significant opportunities for citizen participation in its implementation. The most important of these is the right of citizens to initiate suit against those who violate or fail to enhance the act. On Tuesday, the Justice Department raised the question whether the act was written too broadly in allowing a right of action to challenge agency rules. The Department acknowledged, however, that review would be available in any event under the Administrative Procedure Act, but suggested the citizens suit provision should be narrowed nonetheless.

I suggest that you examine the Department's arguments very carefully because I think what you will find may add up to yet another from the administration's stable of Trojan horses. Concealed inside this one is a desire to limit narrowly those citizen suits where attorneys' fees are available. If this administration truly intends to carry out this improtant statute responsibly, it should not fear broad citizen suit or attorneys' fees provisions.

Thank you, sir.

Senator **Chafee**. Thank you.

Mr. Berlin, why don't you proceed, and we will probably have some questions for the both of you.

STATEMENT OF KENNETH BERLIN

Mr. **Berlin**. Thank you.

I am here to testify on behalf of the National Audubon Society and the same 11 or 12 groups that Mr. Bean testified on behalf of in support of the reorganization of a strong Endangered Species Act. The task assigned to me by this group is to respond to criticism of the act raised over the past 2 days of testimony. I might say in watching Senator Chafee turnover the time clock—that the number of specific criticisms of the act have been so few I can respond to them in a 5-minute period.

Essentially there have only been three or four criticisms of the act raised. One relates to the Illinois mud turtle: one to ASARCO; and one to the Wildcat Reservoir. I will address each one of these problems in discussing how the Endangered Species Act works, and

I can address them even though I have seen the testimony for the first time today.

I would like to begin with the Illinois mud turtle that concerned Senator Mitchell on Tuesday.

In looking at that, there was a claim made on Tuesday that this listing had no scientific validity at all. I might point out to begin with, that in fact the mud turtle is listed in every single State where it is found in the wild today. Every single State, including Illinois, submitted written comment to the Federal Government recommending it be added to the list. The Governor of Illinois himself sent the letter supporting the addition of this species to the list.

I have here a proposed 45-page final rule on listing of the mud turtle that was put together by the Office of Endangered Species, sent to their bosses and ultimately rejected.

I will make this available to your staff, but I think you will find the analysis here is extremely good; that every other government entity involved here has found the turtle was endangered, and that it is facetious to sit here and argue there was no scientific basis for having considering that species at the time.

I would like to turn next, to the basic problem we have here—that there is basically a great deal of misinformation surrounding each of the issues we are faced with, particularly with respect to the whole question of how section 7 works.

Before I go on to specific examples raised this morning, I would like to remind the committee of a number of things about the act. I think they are instructive and show that the act has succeeded well in finding a balance between environmental protection and economic growth.

As was pointed out on Tuesday, there were 9,673 consultations over the last 3 years. In all but about 154 of these, the potential conflict between endangered species and projects was resolved without a jeopardy opinion. As the regional director of Fish and Wildlife Region 7 found, in 90 percent of the cases we can resolve these differences before we go to the formed consultation process.

In cases where the Fish and Wildlife eventually found jeopardy, the fact of the matter is, the project sponsor was able to modify the project so it could proceed, and I think the important thing for this committee to keep in mind is that in everyone of these cases, the sponsor found it economical to continue the project, even after the consultation and jeopardy process had finished.

So there has not been a single example brought to this committee's attention that showed section 7 to stop projects, and if there are examples, there are very few, because we have not identified one.

Also I might point out that while there have been allegations of delay, the study showed that in fact on the average the consultation process has worked as Congress intended. The average consultation is taking less than 90 days. There are cases where the consultation has exceeded that. I submit in every case there was a voluntary agreement to extend that consultation. Basically private sponsors have two choices, either try and develop more information if in fact, as was testified to this morning, the amount of information was inadequate to establish nojeopardy; or they could go for an exemption. In every case they chose to make further studies. The testimony this morning said that project sponsors do that because they want to go to a "lower level." That is what we want and what the Congress wanted out of this statute. We want these problems worked out in a way that protects the species, and the act has been successful in doing that.

I might also point out that in region 6, the principal western region of the country, the regional director wrote to Fish and Wildlife and said where there have been delays, there were almost none solely because of the Endangered Species Act. There were other statutes involved, maybe state statutes or the Clean Air or Water Act, Wilderness Act, National Environmental Policy Act, but very very few examples, according to the regional director, of the act itself causing a delay, where there were no other factors involved.

I would like to turn next to the question of western water issues raised this morning.

Senator CHAFEE. You had better turn quickly because your 5 minutes are up. I will give you a grace period of 2 minutes.

Mr. BERLIN. There are several quick responses to the questions here. First, unlike the Water Act, the goals of the Endangered Species Act cannot be accomplished without requiring control over water quality. In the case of the Water Act arguably, you can control water quality without controlling water quantity by traditional polution control methods. The Endangered Species Act, however, cannot protect endangered species dependent on water if there is no water in the streams involved. We have come up with a national purpose to protect endangered species, and we need the kind of restrictions the act provides. We have accomplished this without stopping economic development. Every one of the water conflicts have been worked out, and we therefore think the act is working in the West.

As far as the ASARCO project, I submit that the testimony is not supported by the documents submitted by Dr. Tate himself. If you will look at page 12 of that document, you will find that ARCO started consultation on April 2, 1979. In early July they decided that, because this consultation process was taking time, they would drill slightly outside the original area, 1,500 feet away, where they did not need approval. They dug two test wells and went ahead; in September a final decision was made, and the service found no jeopardy and the project proceeded.

On page 13 he says, "The United States Forest Service permit imposed 62 special management constraints on the project." The Endangered Species Act imposed only 3 constraints. Again, if people look at that project, they will see it is one of just economic promise to ASARCO, with rich copper and silver deposits expected. ASARCO is going ahead with the project, and they have potential to make vast amounts of money from it.

The other example of Dr. Tate is the Wildcat Reservoir in Colorado. That is not an example of conflict between the act and the project. Instead, the project sponsors simply refused to recognize that the act even applies. What happened was that a biological opinion was prepared with alternatives, which it said would avoid jeopardy to the species. The project sponsor was given a choice of accepting those alternatives and be granted a national 404 permit;

or if he chose not to accept the permit, to go to EPA or the Corps to obtain a specific site permit for that project.

They decided to make a test case, they went to litigation, and we don't know if there is any conflict now, because this is being used as a test case by the project sponsors.

Thank you.

Senator **Chafee**. Thank you, Mr. Berlin.

Mr. Bean, you have spent some time saying we need more expeditious listing. What should we do, should we shorten the 2-year timeframe? What are your suggestions?

Mr. **Bean**. My principal suggestion would be to eliminate from the listing process the requirements that critical habitats be designated at the time of listing and that economic assessments of critical habitat designations be done. As my written statement makes clear, there are really two Separate functions that must be kept distinct. The first function is to determine what species are in fact endangered, and that should be purely a biological determination.

The second function, once you have determined what is endangered, is what you want to do about it. How much protection do you want to give it? Is it worth the cost that it may entail?

By virtue of the 1978 amendment, Congress has merged these two functions and forced upon the listing process the inappropriate consideration of what price we may have to pay eventually if we list a species. The result has been that nothing gets listed.

My sense is that most of what was done in 1978 to section 4 of this act, has only increased the opportunity for economic—and therefore political—factors to influence what gets listed. So I think we must repeal much of what was added in 1978 to improve the listing process.

Senator **Chafee**. Mr. Berlin, when you were at the Justice Department, did you encounter much litigation concerning critical habitat?

Mr. **Berlin**. We had several cases which highlighted the provision. Essentially they highlighted the fact that it is a misunderstood provision, a very hard provision to explain. There were two cases brought by industry groups in the South and West at bucking the designation of critical habitat on the ground it would affect private property use. As this committee knows, that is not the case, the critical habitat provision only applies to Federal activity.

Aside from that, there have been essentially no lawsuits that I am familiar with brought by environmental groups on critical habitat where there was no accompanying showing of jeopardy to the species.

Senator **Chafee**. Senator Mitchell?

Senator **Mitchell**. Mr. Berlin, you talked about the Illinois mud turtle. Was that listed by the Service?

Mr. **Berlin**. No, it was not. The ultimate decision was there was not enough evidence to make a determination to list or not list the species.

As I pointed out, the biologist who worked on the case maintained strongly while until the end that it should be listed, and I suppose there are two explanations why it was not. One is that reasonable men may differ when they look at evidence like this. The other is that they may decide discretion is a better part of valor.

Senator **Mitchell**. Is it fair to say that in your statement, whichever one of those interpretations you put on it, it does not support the experience of that case, it does not support the statement made by Mr. Boynton, that it is an example of proceeding without any scientific basis and costing the private company in that case, the allegation was $500,000?

Mr. **Berlin**. I think it is incorrect. As I said, the species listed is endangered in every State it is found.

If you look at the proposed final rule, there is detailed evidence on everything. I might say that Monsanto had been involved here, had spent money on that as a corporation, even before the proposal was made and there was no analysis done at the time that predicted no significant economic impact on ASARCO. I think the example is incorrect.

Senator **Mitchell**. Mr. Bean commented on the suggestion made Tuesday by Mr. Boynton that section 7 be amended to add the words "to the extent practical," and Mr. Bean was rather explicit in his opposition.

Tell us your reaction.

Mr. **Berlin**. I agree, I think we have a long history to work with, and it shows it was practical in every case to insure that the project did not jeopardize the species. We have had over 9,000 consultations in the last 3 years, and we had 154 jeopardy opinions, and every one of those cases it was practical for the company to modify their project. Now in a sense the act allows them to make practical choices. If you put the extent practical language in, we would have an impossible time determining what the real responsibility of the company was.

When American business faces that responsibility, they face it well and successfully and avoid a controversy.

Senator **Mitchell**. Mr. Bean, you spent time on a listing process. Were you here on Tuesday?

Mr. **Bean**. Yes.

Senator **Mitchell**. I cannot recall who made the suggestion, but there was a discussion about requiring or permitting under certain circumstances a formal hearing, to establish some sort of process by which cross-examination and some basis for testing allegations could be made in connection with the listing process. Do you have any comments on that?

Mr. **Bean**. Yes. I believe the suggestion was made that such a procedure should apply only in some instances and not all. I would certainly strongly oppose requiring that as a standard procedure for all proposed listings, because I have experience of my own in hearings before administrative law judges, and one can expect lengthy delays if that is the procedure by which all listings must be accomplished.

Senator **Mitchell**. But is that necessarily bad? You certainly represent a point of view that has in other circumstances taken full advantage of the delays which are inherent in legal processes.

Mr. **Bean**. The administrative law judge process is designed to elicit a fuller factual record by allowing cross-examination of people with different points of view, and it is certainly useful in that regard.

I am inclined to consider seriously this suggestion as perhaps an alternative to some of the extraordinary procedures that are now required that do not, and are indeed never likely to, produce information that is of a sound biological or scientific character. In other words, the listing process today is characterized by great debates over the economic consequences of listings, and my feeling is that that is a separate question that should be taken up later. The listing question should focus solely on the biological status of the species.

Senator MITCHELL. Could not that process be improved by being subject to the act?

Mr. BEAN. It might in some circumstances. I believe there is general agreement that such a proceeding would not be necessary in most circumstances. Certainly for most of the species now listed there is not very much real controversy as to whether, they are in fact endangered. To require a procedure that is out of proportion to the degree of controversy is unnecessary.

Senator MITCHELL. Do you concede in some circumstances it might be appropriate?

Mr. BEAN. It may, yes.

Senator MITCHELL. Would you consider and submit to me in writing a recommendation of under what circumstances you feel a formal hearing process would be advantageous, and some process for distinguishing between the two types of cases.

Mr. BEAN. I will consider that, I do not know how easy it would be to draft it, but I will try.

Senator MITCHELL. Would you do the same, Mr. Berlin?

Mr. BERLIN. I will look into it, I would like to say one thing here. As you know, there are a myriad of procedures before listing, which is a kind of rulemaking procedure that is conducted very carefully, as you will see with the mud turtle. There is complete analysis in that of all comments received and a clear attempt to reach out to scientific communities to develop as much information as possible in this context.

In dealing with a scientific decision like this, I *BAD MAG TAPE**ERR01*am not sure there are very many situations where an adjudicatory hearing at an agency level adds very much to the process. There is nothing in the current process that stops an individual who is dissatisfied with a listing from challenging it in the court. It seems to me that when we are making a technical decision we are better off placing that in the hands of an agency and letting somebody challenge that in the court.

Senator MITCHELL. It is nothing except the delay.

To state it more bluntly, I was being circumspect. Many people who say these environmental lawyers are masters at using the courts and judicial processes to kill by delay any litigation expense projects they don't agree with. Now here they come along and people on the other side say we want this, but because they feel it would delay something they are in favor of, and all of a sudden they are not for these hearings.

Would that be fair for somebody to make?

Mr. BERLIN. No, because there is nothing that stops this. A person can go into court and challenge the rulemaking as being arbitriary and capricious.

What the difference is, the administrative law judge here would make the final decision within the agency. I think that is probably better made as a scientific decision by the agency, followed by a lawsuit if anyone feels that decision was incorrect. The same delay can occur there as it can in a section 7 process.

Mr. BEAN. Senator Mitchell, if I might add one more word on that subject.

As I recall, section 4 of the act authorizes and in some circumstances requires, the Secretary of the Interior or Commerce to hold a hearing with respect to a proposed listing. It does not specify if it is to be of a legislative or adjudicative nature. The hearing is not restricted to the legislative type and could it be so wished, be conducted as a trial-type hearing. In short, the act probably is flexible enough to allow for that as now written.

Senator MITCHELL. Mr. Bean, you went through a sequence of figures which ended with the statement that under this administration no new listings were proposed.

Mr. BEAN. Yes.

Senator MITCHELL. Let me be explicit. It has been alleged that this administration is undermining the environmental laws of this country to some extent by direct assault on the Clean Air Act among other things, but to a greater extent by not enforcing massive budget cuts and so forth.

Do you believe that this administration is undermining this act by simply not proposing any listings?

Mr. BEAN. Yes, I do.

Senator MITCHELL. You do?

Mr. BEAN. Yes.

Senator MITCHELL. Do you, Mr. Berlin?

Mr. BERLIN. Yes, I do, I think they are. I think by not listing species you are undermining the purpose of the act which is to protect species that need protecting.

Senator MITCHELL. So this is a circumstance in which it does not make any difference what the law says. If the person or persons charged with making listings or proposing listings do not do so, we could write the strongest act in the world and nothing is going to happen, is it?

Mr. BEAN. Well, I would respond to that in part in this way. In January, as the old administration was about to leave office, a number of listings were published in the form of final rulemakings. As you probably know, final rulemakings do not become effective until 30 days after they are published. In these cases the 30 days expired after January 20, but before they expired, the new administration suspended the effectiveness of the 44 species listings that were then pending as final rulemakings, and that suspension was renewed six times.

In July my organization served notice on Secretary Watt that it would sue if he continued to suspend the effectiveness of those final listings. Within the 60-day notice period prescribed by the statute prior to our being able to file suit, he ceased suspending them. He has not initiated any new listings or any new proposals since then.

I am not sure we have a hand to force him to do so, so I think the answer to your question may well be yes. We are in a bad situation, and we therefore depend very much upon the relevant committees of the Congress with jurisdiction over this statute to make known in the strongest possible way their view that they don't approve of the way this administration is administering the act. That is about all we have.

Senator MITCHELL. In a sense, what section 7 and what section 4 and section 9 says is less significant than what anybody charged with specific responsibilities under the act in fact does, is that not true?

Mr. BEAN. To the extent you allow discretion and to the extent the person with that discretion wants to exercise it within his limits so as not to accomplish the purposes of the act, there is no way to avoid that result.

Senator MITCHELL. You are not suggesting that Congress get into the act of making listings?

Mr. BEAN. No, I don't think I would approve of that.

Senator MITCHELL. With the composition of the Senate, you might not get what you want either.

I want to ask you one final question here. You heard the testimony regarding the budget of the Service in this area on Tuesday. It was indicated that the funding in previous fiscal years was $24 million. The administration proposed funding of $14 million.

In your judgment, could the Service effectively perform its functions under this act assuming it could do so, the funding at that level?

Mr. BERLIN. Again, I would have to agree with the National Wildlife Federation that it could not do so. The wildlife trade area I worked at before in the Department of Justice, was cut back under that proposal, and it would have had a disasterous effect on their ability to effectively enforce the law. Another example is the listing process that was previously dismissed, so we don't think they can function effectively.

Senator MITCHELL. Mr. Bean?

Mr. BEAN. I would agree, and add that section 8 of the act says that as a demonstration of the commitment of the United States to the worldwide preservation of endangered species, the Secretary of the Interior is authorized to give financial and other assistance for conservation projects in foreign nations. In the current budget, the Secretary of the Interior is without any money to assist foreign conservation projects by using excess foreign currency. These are moneys not available for expenditure in the United States for any other purpose. So nothing is being gained by this action, which serves as yet another illustration of why the current funding levels are inadequate.

Senator MITCHELL. You heard Mr. Meyers testify on Tuesday that one of the problems in the act from his standpoint is that there are too many listings and Interior ought to publish a combined index list.

Do you agree or disagree with that statement?

Mr. BERLIN. I certainly agree. I seem to remember that there are—there may be such lists around, putting together by private groups, but I see no reason why Fish and Wildlife should not do that, I think it would be helpful.

Mr. **BEAN**. It is a scissors and tape job, and there is no reason it cannot be done.

Senator **MITCHELL**. Thank you very much for your testimony.

The final panel includes Dr. Edward Wilson, Dr. Thomas Eisner, Dr. Peter Raven, and Dr. Stephen Kellert.

Gentlemen, we welcome you here today and look forward to your testimony.

Each of you, I assume, has a prepared statement, and if each of you would summarize your prepared statement or read those portions you deem most significant, and try to finish in 5 minutes, then we will have an opportunity for questions.

So we can begin in any manner you prefer, either the way you are listed, or as you are seated.

First of all, why don't you begin by identifying yourself.

STATEMENTS OF EDWARD O. WILSON, BAIRD PROFESSOR OF SCIENCE, HARVARD UNIVERSITY; PETER RAVEN, DIRECTOR, MISSOURI BOTANICAL GARDENS; THOMAS EISNER, JACOB GOULD SCHURMAN PROFESSOR OF BIOLOGY, CORNELL UNIVERSITY; AND STEPHEN KELLERT, ASSOCIATE PROFESSOR OF SOCIAL ECOLOGY, YALE UNVERSITY, SCHOOL OF FORESTRY AND ENVIRONMENTAL STUDIES

Dr. **WILSON**. I am Edward Wilson, and I will begin the statements.

Dr. **RAVEN**. I am Peter Raven, and I will be second.

Dr. **KELLERT**. I am Stephen Kellert, and I will be fourth.

Dr. **EISNER**. I am Thomas Eisner and I will be third.

Senator **MITCHELL**. Why don't you go ahead, Dr. Wilson?

Dr. **WILSON**. I am Edward Wilson, Baird Professor of Science at Harvard University, a member of the National Academy of Sciences. I was involved in the creation of a new branch of ecology that has made possible a more exact assessment of the extinction rate, the process of colonization, and other topics vital to this problem of species extinction.

We are moving in the direction of allowing quicker and more competent assessment of this kind, but as Mr. Chafee said earlier, we are very far from transforming it into an exact science like physics, so that these problems cannot be resolved quickly.

My argument this morning is primarily an ethical one and will be prefatory to what my three colleagues will be saying, because they have statements prepared on the more immediate vital economic and scientific aspects.

All of the witnesses thus far have been talking about cost benefit analysis, and I think that is really the instrument of almost all such discussions.

I and Drs. Eisner and Raven in particular will make the essential argument that the benefit of saving species is enormous, greater than has been argued even rhetorically in the past.

The great German zoologist, Karl vonFrisch once said that the honeybee is like a magic well: The more you draw from it, the more there is to draw. And he meant not only the direct economic benefits of that particular one species, but also the very great amounts of new knowledge that he and his colleague obtained about physiology, biochemistry, behavior, and action of the nervous system; these studies led to his being honored with a Nobel Prize in 1973.

Beyond the information on ecology, physiology or genetics, the way the eye works, the way learning takes place, and so forth, one can delve still further down in any one of such species; and in fact this is being done, to the basic genetic processes of biochemistry; and on down further as we go along to the one-hundred thousand or so genes that make up a species. We are gaining the power to identify the hereditary material chemically, to take apart and utilize it in both basic scientific studies and practical applications and genetic engineering as Dr. Eisner will be documenting. And we can probe still deeper to consider the particular history of the species, projecting back literally millions of years through countless episodes of competition, predation, and so forth. And finally, we can examine the manner in which the species might be fitted into other interacting systems to interact and evolve into the future.

Every species, even those with such humble names as the mud turtle, is a magic well.

There are probably between 3 and 10 million such species around the world. We have only described and put into museums a tiny fraction of them, and only a few dozen have been studied with any detail as in the honeybee.

So we are on the edge of the frontier that we have begun to proceed. Once you take a pinch of soil you find more complexity therein, more structure, and more opportunity for basic research than on the entire surface of Jupiter.

We also recognize that there is a kind of rising consciousness at large, both among scientists and the public in general, about the significance and deep meaning of life on Earth.

At the end of 1979 Harvard magazine asked seven members of the faculty at Harvard University to answer the following question: What is the most important problem facing this Nation of the world, or the world, at the start of the decade, and what resolution should be made to solve it? I changed the question somewhat to read: "What event likely to occur in the 1980's will our descendants most regret?" I answered that the worst thing that can happen, will happen, is not energy depletion, or domination by a foreign power, or economic collapse. As dreadful as these catastrophes would be, they could be repaired in a few generations. But the one process ongoing that will take millions of years to restore is the loss of genetic and species diversity by the destruction of natural habitats, careless misuse of parts of the environment that result in species extinction. That is the folly our descendants are least likely to forgive.

So I think it reasonable to suggest that first, a deeper conservation ethic can and should be promoted that recognizes the uniqueness, extremely ancient history, and potential importance of every species, however obscure and insignificant it may happen to appear at this stage of scientific knowledge and public acceptance:

Each rare and endangered species should be treated as part of the national heritage, no less than American history and the finest products of our culture.

By example the United States should provide world leadership in promoting a more enduring conservation ethic reflected in the protecting of all of its endangered species until such time as we can more accurately assess the enormously rich and deep treasures that have been bequeathed to us.

Senator MITCHELL. Thank you.

Mr. Raven?

STATEMENT OF PETER H. RAVEN

Dr. RAVEN. I am Peter Raven, director of the Missouri Botanical Garden at St. Louis, Mo. I am a member of the National Academy of Sciences and a past president of the Botanical Society of America, and also president of the Association of Systematic Collections, which I mention because the Association of Systematic Collections, under contract with the Fish and Wildlife Service, has produced a computerized and continuously updated listing of all federally protected species, including a compendium of all State laws applying to those species. This is pertinent in relation to the earlier remarks.

If I may, I would like to begin my testimony today with an example of a familiar group of plants, the evening primroses *(Oenothera)*. I have been engaged in research into these plants for more than 20 years, with the support of the National Science Foundation; hence, I hope my interest in them will be understandable. The evening primroses are wild plants, mostly with yellow or white flowers, that occur in natural places and along roadsides throughout the United States. Some 60 kinds, or about half of the world total, occur in our country. Until recently, they have been prized mainly for their attractive flowers, which for the most part, open in the evening.

Four of the evening primroses, the Eureka Dunes evening primrose *(Oenothera avita* subspecies *eurekensis)*, the Idaho Dune evening primrose *(Oenothera psammophila)*, the Arkansas suncups *(Oenothera pilosella* subspecies *sessilis)*, and the Antioch Dunes evening primrose *(Oenothera deltoides* subspecies *howellii)* are considered in the listing of "Endangered and Threatened Plants of the United States," published by the Smithsonian Institution in 1978, to be endangered. The last-mentioned species has actually been federally classified as endangered; a critical habitat for it has been declared on the dunes at Antioch, Calif.; and it has been portrayed on a U.S. stamp. In addition to these four evening primroses, and additional species, *Oenothera organensis* of the Organ Mountains of New Mexico, is listed by the Smithsonian Institution as threatened. Our recent unpublished studies have indicated that a sixth evening primrose, Wolf's evening primrose *(Oenothera wolfii)* of the coastal dunes of northern California, also ought to be considered endangered.

So far, well and good. The evening primroses might, on the basis of all knowledge available until about 5 years ago, simply have been considered wildflowers and, as such, curiosities upon which human welfare most certainly did not depend. Very quietly, however, during the 1970's commercial research began on evening primroses in the Netherlands, Germany, and England—all countries where weed evening primroses introduced from the United States abound. The reason that these neglected plants were gradually proving of interest to giant chemical concerns in Europe was the discovery that the oil in their seeds is one of the only two known rich natural sources of a nutrient called gamma-linolenic acid [GLA]. The other natural source in which GLA is abundant is human milk. GLA is a polyunsaturated fat and also an essential fatty acid. Essential fatty acids form part of the membranes that surround the cells of the body; they are essential for the proper functioning of these membranes. They are also precursors of prostaglandins, which are hormones that are produced by every organ of the body and control the second-by-second regulation of organ functions. It now appears that modern human populations are characterized by a widespread deficiency of essential fatty acids—a deficiency that seems to lead to many diseases that are common in our population, including eczema, diseases of the arteries, and arthritis. All of them are considered mysterious in origin, and all are resistant to therapy. It so happens that GLA is the most active of all essential fatty acids in correcting these deficiencies. In other words, oil derived from the seeds of these wildflowers may prove to play an essential role in helping us to avoid coronary heart disease and to cure such diseases as eczema and arthritis, diseases that afflict millions of people in the United States. Research in medical schools all over the world is suggesting many additional applications for GLA, and the scientific press over the past 3 months has seen a proliferation of articles on the topic. Investors all over the world are suddenly trying to find the best ways to convert a wayside wildflower into a large-scale commercial crop.

Who knows which of the evening primroses of the United States may prove to provide the richest source of gamma-linolenic acid? The Antioch Dunes evening primrose was federally listed primarily because it happened to occur in a locality where there were two species of endangered butterflies. If the butterflies were not there, development of the dunes at Antioch might have continued, and instead of allowing a chemically unknown member of a group of plants that produces a chemical that has now proved to be of intense interest to human beings to continue to exist, we might simply have had more cement manufactured from the beautiful white dunes of Antioch. Would that have been progress, and if so, for whom would it have been progress? It surely brings to mind a memorable sentence from the World Conservation Strategy recently developed by the International Union for the Conservation of Nature and Natural Resources: "We have not inherited the Earth from our parents, we have borrowed it from our children."

The Endangered Species Act of 1973 should be reauthorized and strengthened not only because we have a rich, beautiful, and valuable assemblage of plants and animals within our borders, but because we historically have been, and still are, leaders in the world conservation movement. Although we comprise less than one-thirtieth of all of the people in the world—and our proportionate representation is shrinking with every passing year—we, as a nation, have played a key role in giving rise to the conservation movement, a movement in which our leadership is needed now more than ever. Our Endangered Species Act, as well as the Convention on International Trade in Endangered Species [CITES], which were developed as integral parts of the same plan, together help to provide the mechanism by which human beings can preserve some of their options for the future. Half a century after our great early conservationist, Aldo Leopold, pointed out that the first rule of intelligent tinkering was to save all the cogs and wheels, some of us still have not come to appreciate the lesson. If we ignore their individual importance to us, we may regard species simply as dispensable impediments to whatever actions might seem to be called for by the demands of the moment, instead of as unique, and therefore priceless, elements in the world's array of living things.

Plants, animals, and microorganisms working together in complex interrelationships that are still very poorly understood make up the biosphere, the worldwide web of life of which we human beings are a part. As we progressively modify this biosphere to cultivate our crops, grow our animals, and produce products of direct economic interest to us, we simplify the relationships and increase the instability of the system as a whole. As our actions promote the extinction of organisms worldwide, we lose the "cogs and wheels" of which Aldo Leopold spoke—the elements which, like the evening primroses, might have proved later to have been of the greatest interest and importance to our descendants.

The extinction of plants and animals worldwide is probably, as my colleague, Prof. E. O. Wilson has pointed out, the most significant event that is occurring in the world during our lifetime. The reasons that this is so may now briefly be outlined.

To the current world population of about 4.5 billion people, roughly 2 billion more—a number equal to the entire population of the world in the year 1930—will be added during the next 20 years. Some 90 percent of this growth will take place in the tropics, where a majority of the species of plants and animals, and by far the most poorly known of these, occur. The World Bank has estimated that some 800 million people in the tropics live in absolute poverty at the present time, and there is little likelihood of reducing this number, even proportionately, while the populations of tropical countries double—inevitably because of their age structure—over the next quarter century. The effects of this rapidly growing population of tropical vegetation cannot be overestimated, and many of us believe that something like a million species, amounting to about a quarter of the diversity of life on Earth, will become extinct during the next 30 years or so—in other words within the lifetime of a majority of those alive at the present day.

Many of the organisms that will become extinct in the near future might have considerable economic potential, and yet we are losing them so rapidly that we will not, in many cases, have the opportunity to explore this potential. The legumes, for example, are a large group of plants comprising some 18,000 species. The members of this group are well known for their ability to fix nitrogen, and thus make it available for the enrichment of soils. Among the legumes are many economic plants, such as peas, beans, soybeans, and alfalfa, as well as many of the newly popularized fast-growing tropical trees—trees that hold great promise in the desperate search for firewood that is increasingly characteristic of the tropics. Which of the legumes can safely be consigned to extinction? Or which of the grasses, with about 10,000 species, including rice, wheat, rye, barley, oats, corn, bamboos, and many other plants of tremendous economic importance, can we do without?

Whether we think of the biosphere as a gigantic worldwide resource for human exploitation and modification, or whether we think about the individual plants, animals, and microorganisms that make up the biosphere as scientifically or esthetically interesting or potentially useful for human welfare, the consequences of extinction can only be seen as catastrophic. We must, as a human race, try to find ways to ameliorate the consequences of this extinction, and the United States and similar developed countries must continue to provide the powerful role of leadership that they have exercised in the past in this critically important area.

No matter what we do, however, many species are going to become extinct, and tradeoffs for human welfare will be necessary. In its current form the 1973 Endangered Species Act, together with its 1978 amendments, provides a mechanism whereby we can both safeguard our own domestic genetic resources and maintain this position of leadership. During the past 3 years, no new projects have gone through the exemption process, and there is no evidence that the Endangered Species Act is having a major negative role in our economy. Certainly, with the availability of the exemption process, created in 1978, there seems to be no logical reason to attempt to weaken section 7 of the original act. In other words, no reason why Federal agencies should be allowed to jeopardize endangered species as a matter of course, once an appropriate determination, soundly based on fact, has been made. What is needed, in fact, is sufficient funding to make it possible for the Departments of the Interior and Commerce to accelerate the determinations of endangered and threatened species of animals and plants in the United States, and to list them and determine critical habitats for them in a timely fashion. Plants that have been federally determined to be endangered should be accorded the same protection as animals, and it should not be legal to take them either without specific permit procedures. There should be a restoration of funds for selective studies of endangered and threatened species in the individual States, and financial support should also be accorded to foreign countries in this area to the extent possible.

I would like to conclude, as a botanist, by emphasizing the inversion of values that must come to characterize our efforts to preserve endangered species, presumably because of the sentimentality we feel toward such large vertebrates as the California condor, the golden eagle, and the grizzly bear. Plants, and only plants, are able to transform the energy ultimately derived from the Sun into a form in which it can be used by living organisms. The several million kinds of animals and microorganisms that exist in the world, and make up the biosphere, owe their continued existence to no more than 300,000 kinds of green plants and algae which have the ability to capture the Sun's energy. Since 15 or more kinds of animals and microorganisms exist for every single kind of plant, it may be assumed that the extinction of one kind of plant may, in turn, ultimately bring about the extinction of a dozen or even many more kinds of animals and microorganisms. In addition, I hope that the example of the evening primroses will have reminded us of the fact that plants are themselves natural biochemical factories from which we derive many important commercial products. We have not even begun to investigate the great majority of plants for any property of potential interest, and the chemicals they contain are just beginning to be explored.

From either of these points of views, it makes obvious good sense to hold on to the plants that we have. In the United States, about 10 percent of the roughly 20,000 species of plants should probably be classified as endangered or threatened under the meaning of the act, whereas roughly half of the approximately 2,200 native plant species found in Hawaii deserve such classification. The Smithsonian Institution, in 1978, listed 1,485 kinds of plants as endangered, 1,408 as threatened, and 360 as extinct. During the 8 years in which the Endangered Species Act has been in operation, the Department of Fish and Wildlife has listed 63 plant species as endangered or threatened, or about 2 percent of the total. Many of the remainder will be lost if the process is not accelerated.

Some of our natural vegetation types are being destroyed far more rapidly than others, and the situation certainly deserves attention everywhere, both for plants and for animals. Preservation in nature by the delimitation of critical habitat is clearly the preferable way of preserving plants and animals, and certainly the most cost effective. If the Fish and Wildlife Service is to function effectively in this area, it must hire a staff sufficient for the task at hand, and get on with the job of listing and protecting the threatened and endangered plants of the United States. If this is not to be the case, then alternative ways must be found to achieve these objectives while there is still time. The richest country in the world simply cannot afford to let natural resources disappear one by one through lack of attention or because of the imperatives of short-term gain. Once they are gone, we can never get them back.

The importance of the loss of genetic diversity on a world scale was clearly brought out in the Strategy Conference on Biological Diversity convened at the State Department on November 16–18, 1981. As Under Secretary of State for Security Assistance, Science, and Technology James L. Buckley brought out in his opening remarks, we are permitting high rates of extinction to limit the potential growth of biological knowledge, and thus limiting options not only for ourselves, but for future generations. Wild relatives of domesticated plants and animals of obvious commercial importance, should receive special attention; for example, there are over 100 wild species of plants in the United States and its territories that are threatened or endangered and are the wild relatives of crops of economic importance. It certainly does not require an elaborate argument to indicate why the preservation of these plants is important. A wild perennial relative of corn, recently discovered in Mexico and consisting of a few thousand plants on a hillside in the State of Jalisco, is a close relative of, and interfertile with, corn, which is cultivated over some 70 million acres in the United States—and area the size of Arizona—where about a million farmers grow 7 billion bushels a year, valued at well over $20 billion. Obviously, the loss of such a wild plant has clear and immediate significance, and can easily be identified as detrimental to human interests.

We have fossil evidence that 70,000 years ago our ancestors in the Middle East used the flowers of oriental poppies, as well as those of other plants, to decorate their graves. Most of us know the large scarlet flowers of these poppies from our grandmothers' gardens, where we saw and admired them as children. Within the last decade, we have come to know that these poppies contain a chemical known as thebaine, a compound that can be transformed into the medically important codeine easily, but can be converted into the highly abused heroin only by prohibitively complex and expensive processes. Since thebaine causes convulsions at low dosage, its abuse potential is negligible. Oriental poppies, therefore, can be grown commercially to replace the cultivation of opium poppies that have contributed to such enormous problems throughout the world and here in our own country. They are now being grown commercially for this purpose in France, the Netherlands, Japan, Israel, Yugoslavia, and probably Turkey, and the Soviet Union.

As a human race, therefore, we have known and admired the beautiful flowers of oriental poppies for tens of thousands of years; only within the past few years have we come to understand their agricultural and economic importance. Who can speak to the potential economic importance of the millions of species of plants and animals that coexist with us now, and who is wise enough to decree that anyone of them should be consigned to extinction? We do owe it to those who will come after us to "save the cogs and wheels," because we have not learned only a small part of what we need to know about intelligent tinkering yet. I am sure that, in its wisdom, this committee will take the necessary steps to preserve as many options for survival as possible for ourselves, our children, and our grandchildren. I thank you for the privilege of having addressed you today.

Senator MITCHELL. Thank you, Dr. Raven.

STATEMENT OF THOMAS EISNER

Dr. EISNER. I am Thomas Eisner, professor of biology at Cornell University and a current chairman of the Section of Biology of the American Association for the Advancement of Sciences, the largest scientific organization in the United States.

I am a research biologist in the field of chemical ecology. My interest is the chemistry of nature. For over 20 years, my collaborators and I have been isolating, identifying, and studying the biological properties of new chemical substances derived from animals and plants.

What I would like to do is to focus specifically on some of the practical consequences of species extinction. What benefits do we stand to lose, both foreseeably and potentially, if we do not somehow stem the tide of extinction?

Let me deal with some foreseeable consequences first. Species extinction means restriction of biological diversity. And restriction of diversity means restriction of the chemical treasure of nature. Let us not lose sight of our enormous dependence on this treasure. A large proportion of the chemicals in use in our present-day civilization were invented by nature, not by the chemist in the laboratory. Take just one example, medicinal chemistry. It has been estimated that fully 40 percent of all prescriptions written in the United States contain as their chief ingredients compounds derived from plants, including lower plants. It was through exploration of nature that these drugs were discovered. And such exploration has a long history of paying off. The Incas already knew of the antimalarial properties of the bark of the cinchona tree, from which quinine was later isolated, and the foxglove plant, the well known source of the heart drug digitalis, was already in medicinal use in medieval times. But many of the most interesting plant drugs in current use were only recently discovered; for example, some of the antileukemic compounds, and anticancer drugs such as vincristine, used in the treatment of Hodgkin's disease. There is in fact no end to the potential for discovery in nature, because we have only begun the chemical exploration of nature. Two of the compounds that I mentioned by name, quinine and vincristine, belong to the major class of chemicals called alkaloids. Thousands of alkaloids are now known, including many that have practical uses. Yet witness the fact that only about 2 percent of the flowering plants, 5,000 of some one-quarter million species, have been tested for presence of alkaloids. The majority of these compounds are still unknown, locked away in the unexplored world of plants, and we are essentially no better informed about the natural distribution of the other major types of organic compounds. There is indeed no end to the potential for exploration in nature, providing wildlife and wilderness are preserved.

Organic chemistry, the discipline that deals with the isolation and characterization of natural products, has made extraordinary progress in recent times. Great simplification has occurred in the procedures by which natural products are isolated from the complex mixtures in which they occur in nature, and minute amounts of a substance often suffice for its complete elucidation. To home in on the chemical unknowns of nature is now a less laborious task than it used to be, and the prospects for discovery are at an alltime high. Yet, even with accelerated exploration, the increased rate of discovery could not possibly keep pace with the rising tide of species extinction. Unless the erosion of nature is halted, much of what is now unknown will vanish before it is known. I find this prospect utterly disconcerting!

Please note that I have emphasized the importance of plants as depositories of useful chemicals. Plants are the source of most natural products in human use, and doubtless the source of vast numbers of additional chemicals yet unknown. Their diversity must be preserved and they must be ruled eligible for protection. And the same holds for the invertebrates, those lower animals toward which we usually show no sympathy. They are, quite literally, a great unknown. In our laboratory, for example, in the last few years, working as a relatively modest group of five to seven researchers, we have isolated: first, potential heart drugs from fireflies; second, a cockroach repellant from a millipede; third, nerve drugs from another millipede; and fourth, shark repellants from a marine mollusc. There is really no telling what, in the line of novel biological materials, the lower animals might have to offer.

My final point deals with what may well, on the long run, prove to be one of the most serious consequences of species extinction. It is a consequence that biologists are only now beginning to appreciate, and may need some years to appreciate in full. Let me elaborate in brief. In these days of genetic engineering, a species is to be viewed as more than just a unique conglomerate of genes. It is to be viewed also as a depository of genes that are potentially transferable. The technology of gene transfer, nonexistent only a few years ago, is now beyond the stage of infancy. Genes can be transferred between microorganisms, they are beginning to be transferred between animals, and they will doubtless eventually be transferable between plants. The implications of this technology are tremendous and the subject of intense current discussion. The extinction of a species, in the light of these advances, takes on new meaning. It does not simply mean the loss of one volume from the library of nature, but the loss of a loose leaf book whose individual pages, were the species to survive, would remain available in perpetuity for selective transfer and improvement of other species. The notion that species extinction is the extinction of individual utilizable genes is no longer fanciful.

Consider, for example, how this might apply to agriculture and specifically to the improvement of plant resistance to pests. Current research in chemical ecology has shown that many plants protect themselves against insects, worms, and microorganisms by use of chemicals that they themselves produce. Many of these compounds have been identified and synthesized, and their effectiveness demonstrated in actual tests. Some, such as certain simple terpenes, are unusually effective. Can such compounds be sprayed on plants as substitutes to convential pesticides? Usually not, since they tend to evaporate or degrade too quickly. The reason they work for plants is that the plants themselves produce them at ongoing rates, in the small amounts in which they need them. Production of these defensive chemicals is under genetic control. Suppose that one were able to transfer the controlling genes from a protected species of plant to one that is not, thereby conveying upon the recipient the ability to produce its own defenses. Imagine being able to endow the cotton plant with the genetic capacity to produce its own repellent against the boll weevil. My prediction is that such transference of genetic capacity will be a real possibility in the future and that benefits will accrue from the technology on a multiplicity of fronts.

Wilderness preservation is justified in my view on esthetic grounds alone, but is clearly mandated on practical grounds as well. The species that we save today will remain to serve as part of the gene banks of tomorrow. The tide of extinction needs to be stemmed. Reauthorization of the Endangered Species Act is an essential small step in the right direction.

Thank you.

STATEMENT OF STEPHEN R. KELLERT

Dr. **KELLERT**. My name is Stephen Kellert and I am an associate professor of social ecology at the Yale University of Forestry and Environmental Studies. For the past decade I have conducted various studies on the interaction of people and wildlife including such problems as endangered species, animal damage control, wildlife habitat preservation and the consumptive uses of wildlife resources. At present I am completing a 4-year research project on American attitudes, knowledge and behaviors toward wildlife and natural habitats. This study was funded by a grant from the U.S. Fish and Wildlife Service and involved personal interviews in the fall of 1978 with 3,107 Americans residing in the 48 contiguous States and Alaska.

I would like to share with you some of the results concerning public attitudes toward endangered species protection. I firmly and confidently believe these results indicate public support for the Endangered Species Act and the process established to determine both the listing and recovery of threatened and endangered wildlife. The entire chapter on endangered species from the first report is attached to my formally submitted written testimony.

In the opinion of most scientists, the Endangered Species Act is a sound response to the biological threat of extinction. That it took until 1966 for the first Endangered Species Act to be passed by Congress, and that the wisdom of reauthorizing the act is being debated today, testifies to the basically political nature of the issue. Given this biopolitical context, a fundamental consideration is public support for protecting endangered and threatened wildlife, particularly in situations where protection conflicts with diverse human needs, wants and material benefits. A chorus of voices has speculated on the public's unwillingness to protect most endangered or threatened wildlife when substantial socioeconomic sacrifice and hardship are involved. In a world of scarcity, unemployment and, in some cases, inadequate food resources protection of endangered and threatened wildlife has been described as a luxury society can ill-afford and which the public will not tolerate. Fortunately, we possess information on this issue of public support, collected in a scientifically standardized, empirical and objective fashion, which I would like now to share with you.

Our national study considered the protection of endangered and threatened wildlife in the context of various socioeconomic impacts including energy, water, forestry and industrial developments. Additionally, the public's knowledge and familiarity of the subject were examined, although these latter results will not be reviewed here but are included in the written testimony.

As indicated by the simplified bar graph in figure 1, when questioned about costly modification of an energy development project to protect varying endangered animals, the American public overwhelmingly favored such modification for the sake of endangered species of eagle, mountain lion, trout, crocodile, and butterfly. In contrast, less than a majority favored this trade-off when the animals included an endangered plant, snake or spider species. On the other hand, as figure 2 indicates, a willingness to make this sacrifice for the endangered spider was found amoung the better educated and members of environmental protection organizations.

The respondents were also asked to consider situations involving conflicts between forestry, industrial development, and protecting endangered wildlife. As figure 3 reveals, a moderate but statistically significant 56 percent of the American public favored the setting aside of 5 million acres of national forest land, at the cost of jobs and building materials, to protect the critical habitat of the endangered grizzly bear. Similarly, a statistically significant 55 percent of the public disapproved of building an industrial plant on a marsh owned by a manufacturer, that would employ 1,000 people in an area of high unemployment, if this activity destroyed the habitat of a rare and threatened bird species.

The final table considers public acceptance of varying water uses if these projects resulted in endangerment of an unspecified fish species. The results indicate public approval of those water projects involving relatively critical human needs, such as projects resulting in hydroelectrical power, increasing human drinking supplies and enhancement of agricultural productivity. On the other hand, less than a majority approved of diverting water to cool industrial plant machinery or making a lake for recreational purposes if these projects threatened a fish species with extinction.

While the public may appear to qualify its protective concern, the results, nonetheless, indicate a fairly pronounced willingness to tolerate major socioeconomic impacts to protect particular endangered and threatened species. An obvious question arising from these findings is their accurate reflection of American sentiment, particularly when people are not confronted with analogous real-life situations. Additionally, how can we explain the apparent willingness of so many people to forego various utilitarian benefits for the sake of rare and endangered creatures they will probably never see, let alone directly benefit from in a material sense?

It has been remarked that the body politic in a democracy retains a collective wisdom which, over the long run, works toward the benefit of the many over the interests of the few. Certainly, this wisdom is not without its irrational moments, but politicians and political philosophers alike have remarked on its logic and success when viewed comparatively in time and across other systems of government. Indeed, as the elected officials in this room are well aware, we pick our leaders in this manner rather than subjecting such choice to a panel of experts. In the process, presidents and others are often elected by margins considerably less than the public support expressed for protecting many of the species reported here.

One additionally wonders what could explain such altruistic sentiment and willingness to render material sacrifices on behalf of particular endangered animals. No answer is definitively self-evident and, yet, such judgments are not unprecedented. Is it so remarkable that most Americans regard the extinction of certain irreplacable forms of life as ethically questionable? History is replete with examples of Americans forgoing substantial material benefits because their acquisition was perceived as inconsistent with more basic assumptions of right and morality. One can cite slavery as an illustration of a practice once and still possessing strong utilitarian value but now perceived as ethically repugnant and inconceivable. Regardless of the explanation offered, the empirical results of this research suggest the American people support the protection of certain endangered wildlife and, by implication, the process involved in assessing and mitigating the socioeconomic impacts that may be necessary.

Thank you.

Senator MITCHELL. Thank you very much, Dr. Kellert.

I would like to ask a few questions and while I direct them at individuals, I would ask all of you to comment if you care to do so.

Both Dr. Raven and Dr. Eisner commented on the rate of extinction of species. Could you gentlemen be a little more specific? Is the rate increasing? How does it compare in recent years to any historical rate of which we have knowledge? What was the point you were making?

Dr. **Raven**. About 2 billion people, as I mentioned, will be added to the present world population of about 4½ billion in the next 20 years. About 90 percent of this population growth will occur in the tropics where about two-thirds of all species of plants and animals occur. Many studies, including one I had the pleasure of chairing for the National Academy of Sciences—National Research Commission have concluded that within 30 years, well within a lifetime of the majority of those people alive now, all tropical forests will have been degraded to the point where there will be mass extinction worldwide. This relationship is also reflected in the Global 2000 Study.

We have concluded in approximate terms, as Dr. Wilson has emphasized to the Harvard Alumni Association, and both Dr. Eisner and I have mentioned, that this is likely to result in a quarter of all living species of plants, animals and micro-organisms over the next 30 years.

Extinction has certainly not been unknown during the course of the last 65 million years. People are arguing about what happened in the more remote past, but the situation we have today is definitely not business as usual; it is an irrevocable loss of a major proportion of all those living organisms that live in the world with us.

Dr. **Eisner**. I have little to add. From personal experience those of us who work in the field—I myself have worked in 30 States and three continents over a period of 20 years—are witnessing this disappearance. In Florida, for example, I have been witness to the gradual disappearance of certain millipedes in some areas. Why, one might ask, should this be a ground for concern?

The sandy terrain of Florida lacks the earthworm populations one finds in more loamy soils. Millipedes in such habitats are an important alternative to earthworms because they convert leaves and other plant remains into soil. They are essential to the natural ecological processes of the region and their disappearance would inevitably have an impact, potentially even a major impact. Multiply such disappearances by the thousands and you have an idea of what is currently transpiring in the world. The only way one can stem this tide of extinction is with a concerted worldwide program of habitat preservation.

Senator **Mitchell**. In the testimony on Tuesday, the representative of the service indicated that they have established a priority listing system which would focus highest priority on higher life forms. Both of you and Dr. Raven commented on the importance of life.

Do you have any comment on that priority listing system? I guess when you don't list anything, it doesn't make any difference what your priority is, but perhaps with an academic expertise, you can tell me your comments on that.

Dr. RAVEN. Well, there is absolutely no way in the world in which those animals for which we feel a sentimental attachment and which might symbolize the question of extinction can survive unless the plants that produce the food for them survive also.

There are roughly 12 to 15 or perhaps even more kinds of animals and micro-organisms for every single species of living plants, which is why many of us believe that with the extinction of each plant, one starts a chain reaction that causes other organisms to become extinct, on the order of a dozen or two kinds of organisms and micro-organisms depending on the system.

It is fine to love the California condor and the bald eagle and the grizzly bear as symbols of worldwide extinction but plants and only plants produce the food that supports the whole living system. Plants must be preserved or we will be left only with a few bald eagles and grizzly bears in zoos, eating an artificial diet.

Dr. EISNER. Could I add something to that? If I were to say that even micro-organisms are worthy of preservation, I might possibly be laughed out of the room. Yet there are grounds for saying so.

The micro-organisms that we fight with antibiotics have an ongoing tendency to develop resistance to these chemical agents. Where do the new antibiotics come from with which we replace the obsolete ones? Some are synthesized in the laboratory, but others are discovered in nature for they are themselves produced by micro-organisms. Thus it is likely that we will be depending on the natural microbial flora for many years to come. They constitute, in a fashion, part of the drug stores of nature—drug stores that will need to be preserved.

Senator MITCHELL. Do any of you have anything else you care to say?

I want to thank you all for coming. I must say that I found your testimony to be not only among the most interesting, but the most persuasive and compelling that I have heard. I only wish frankly that it were possible for President Reagan, Secretary Watt, Mr. Stockman and a few others to hear this testimony, and I mean that sincerely, because you made a very, very effective case.

I cannot help noting that the administration proposed to reduce the budget of the Service by $10 million, and as proposed Congress is in the process of approving building one hundred B-1 bombers at a cost of $400 billion each. That is 40 times the amount by which the budget is proposed to be cut for enforcement of this act, and it is, in my judgment, a rather tragic commentary on our national priorities.

It is clear from these hearings that this administration has abdicated its responsibility under the Endangered Species Act, and is in the process of undermining its enforcement by inaction. And that the responsibility for seeing that the law is not only reauthorized, but strengthened is with those of us in the Congress who believe that it is an important product of our national policy and that it does represent a very high value, not only to this Nation, but to the whole human society.

And then in that effort, your testimony has been most helpful and will provide us with a great deal of assistance and support in the coming months, and I want to thank you very much for being here today.

That concludes our hearings.

[Whereupon, at 11:55 a.m., the subcommittee recessed, to reconvene subject to the call of the Chair.]

[Statements submitted for the record follow:]

OPENING REMARKS

OF

THE HONORABLE

JAMES L. BUCKLEY

UNDER SECRETARY OF STATE

FOR SECURITY ASSISTANCE, SCIENCE & TECHNOLOGY

ON BEHALF OF THE STATE DEPARTMENT AND THE OTHER FEDERAL SPONSORS LISTED ON YOUR PROGRAM, I WOULD LIKE TO WELCOME YOU TO THIS STRATEGY CONFERENCE ON BIOLOGICAL DIVERSITY.

IT IS HARD TO THINK OF A TASK OF MORE FUNDAMENTAL IMPORTANCE THAN THE ONE ON WHICH YOU WILL BE DEVOTING YOUR KNOWLEDGE, INTELLIGENCE AND JUDGMENT DURING THE COURSE OF THE NEXT THREE DAYS, BECAUSE YOU WILL BE DEALING WITH THE STUFF OF LIFE ITSELF.

ALTHOUGH THE 1970'S SAW AN EXTRAORDINARY EXPANSION OF THE AMERICAN PUBLIC'S CONSCIOUSNESS OF THE DEGREE TO WHICH WE DEPEND ON A SOUND ENVIRONMENT, WE HAVE YET TO SEE AN EQUIVALENT UNDERSTANDING OF THE TREMENDOUS STAKE THAT FUTURE GENERATIONS WILL HAVE IN THE ABILITY OF THIS GENERATION TO STEM THE ACCELERATING IMPOVERISHMENT OF THE GLOBE'S BIOLOGICAL DIVERSITY.

WE ARE STILL TOO IGNORANT OF ULTIMATE CONSEQUENCES TO UNDERSTAND IN FULL THE URGENT NEED TO PROTECT EVEN THE MOST INCONSPICIOUS FORMS OF LIFE SO THAT WE DO NOT DIMINISH THE RICH VARIETY OF BIOLOGICAL RESOURCES THAT CONTINUE TO EXIST.

NEVERTHELESS, THE URGENCY IS THERE, AND WE NEED TO PRESS UPON THE PUBLIC CONSCIOUSNESS THAT EXTINCTION IS AN T OF AWESOME FINALITY. EXTINCTION IS ONE OF THE FEW OCESSES THAT MAN CANNOT REVERSE. BUT IF MAN CANNOT STORE A SPECIES, HE IS NEVERTHELESS FULLY CAPABLE OF ESTROYING THEM, WHICH HE IS PRESENTLY DOING AT AN ASTONSHING RATE. THIS CENTURY HAS WITNESSED OVER HALF THE XTINCTIONS OF ANIMAL SPECIES KNOWN TO HAVE OCCURRED IN ECORDED HISTORY; AND, LARGELY BECAUSE OF THE VAST SCALE ON HICH TROPICAL RAIN FORESTS ARE BEING CUT AROUND THE WORLD, T IS ESTIMATED THAT BY THE YEAR 2000 UPWARDS OF A MILLION ADDITIONAL SPECIES -- ABOUT 20% OF THOSE NOW IN EXISTENCE -- MAY BECOME EXTINCT. YET ON THIS THREATENED BIOLOGICAL DIVERSITY DEPENDS IN SIGNIFICANT DEGREE THE FUNDAMENTAL SUPPORT SYSTEM FOR MAN AND OTHER LIVING THINGS.

AS LIVING CREATURES, THE MORE WE UNDERSTAND OF BIOLOGICAL PROCESSES, THE MORE WISELY WE WILL BE ABLE TO MANAGE OURSELVES. THUS THE NEEDLESS EXTERMINATION OF A SINGLE SPECIES CAN BE AN ACT OF RECKLESSNESS. BY PERMITTING HIGH RATES OF EXTINCTION TO CONTINUE, WE ARE LIMITING THE POTENTIAL GROWTH OF BIOLOGICAL KNOWLEDGE. IN ESSENCE, THE PROCESS IS TANTAMOUNT TO BOOK-BURNING; BUT IT IS EVEN WORSE, IN THAT IT INVOLVES BOOKS YET TO BE DECIPHERED AND READ.

UNFORTUNATELY, THIS IS A FACT THAT IS NOT AS YET SUFFICIENTLY UNDERSTOOD. THEREFORE, IT WE ARE TO GENERATE THE NECESSARY SUPPORT FOR THE TASK AHEAD, WE WILL NEED TO REMIND THE PUBLIC THAT FULLY 40% OF ALL MODERN DRUGS HAVE BEEN DERIVED FROM NATURE; THAT MOST OF THE FOOD MAN EATS COMES FROM ONLY ABOUT TWENTY OUT OF THE THOUSANDS OF PLANTS KNOWN TO BE EDIBLE; AND THAT EVEN THOSE CURRENTLY BEING CULTIVATED REQUIRE THE PRESERVATION OF LARGE POOLS OF GENETIC MATERIAL ON WHICH PLANT SCIENTISTS CAN DRAW IN ORDER TO PRODUCE MORE USEFUL STRAINS OR RESTORE THE VIGOR OF THE HIGHLY INBRED VARIETIES THAT HAVE REVOLUTIONIZED AGRICULTURE IN OUR TIMES.

RECENT WELL PUBLICIZED BREAK-THROUGHS IN GENETIC ENGINEERING MAY BE WHAT IS REQUIRED TO FOCUS PUBLIC ATTENTION ON THE EXPLICIT INTEREST EACH ONE OF US HAS IN SEEING THAT THE GLOBAL STOCK OF IRREPLACEABLE GENETIC MATERIAL ISN'T SQUANDERED. THIS MAY HELP US FOCUS ATTENTION ON THE PRACTICAL NEED TO CONSERVE OUR BIOLOGICAL RESOURCES. BUT WE MUST ALSO IMPRESS UPON THE PUBLIC THAT THIS IS INHERENTLY AN INTERNATIONAL PROBLEM REQUIRING AN INTERNATIONAL APPROACH.

A SIGNIFICANT PORTION OF THE BIOLOGICAL RESOURCES THAT TODAY REQUIRE THE MOST URGENT PROTECTION ARE LOCATED IN UNDEVELOPED NATIONS THAT DO NOT HAVE THE RESOURCES TO DO

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THE JOB ALONE. DEMANDS GENERATED IN THE INDUSTRIALIZED WORLD CAN ADD TO THE PRESSURES WITH WHICH SUCH NATIONS MUST COPE, WITNESS THE IMPACT OF THE JAPANESE APPETITE FOR LUMBER ON INDONESIAN FORESTS. MIGRATORY BIRDS AND MARINE LIFE CAN ONLY BE PROTECTED THROUGH INTERNATIONAL COOPERATION.

THERE ARE OTHER AREAS WHERE OUR KNOWLEDGE OF ECOLOGICAL CAUSE AND EFFECT IS STILL TOO UNCERTAIN TO ENABLE US TO REACH FIRM CONCLUSIONS AS TO THE EXTENT OF OUR OWN SELF-INTEREST IN WHAT HAPPENS TO PLANT AND ANIMAL LIFE HALF A WORLD AWAY. WHAT, FOR EXAMPLE, IS THE MODULATING ROLE -- IF ANY -- THAT IS PLAYED BY THE WORLD'S BIOTA ON GLOBAL WEATHER PATTERNS; WHICH IS ANOTHER WAY OF SAYING, WHAT MIGHT BE THE IMPACT OF THE DESTRUCTION OF BRAZILIAN RAIN FORESTS ON THE PRODUCTION OF WHEAT IN KANSAS SOME FIFTY OR ONE HUNDRED YEARS FROM NOW? WE DON'T KNOW. BUT BECAUSE THE POSSIBILITY OF SUCH AN IMPACT IS NOT ENTIRELY IMPLAUSIBLE, IT CAUSES THIS CONSERVATIVE, AT LEAST, TO URGE CAUTION; IT BEING A CONSERVATIVE'S AND A CONSERVATIONIST'S INSTINCT TO BE CAREFUL ABOUT DISTURBING SYSTEMS WHICH SEEM TO HAVE BEEN WORKING REASONABLY WELL FOR AN AEON OR TWO.

IN ANY EVENT, AS A LONG-TIME CHAMPION OF THE SNAIL DARTER AND FURBISH LOUSEWORT AND OTHER EQUALLY OBSCURE BUT

ENDANGERED SPECIES, I AM ESPECIALLY PLEASED THAT THIS CONFERENCE HAS ATTRACTED SO DISTINGUISHED A GROUP OF PARTICIPANTS.

YOU MORE THAN MOST UNDERSTAND THE SPECIAL MEANING FOR OUR TIMES OF EDMUND BURKE'S REMINDER THAT THE MEN AND WOMEN OF ANY GENERATION ARE BUT "TEMPORARY POSSESSORS AND LIFE-RENTORS" WHO "SHOULD NOT THINK IT AMONG THEIR RIGHTS TO CUT OFF THE ENTAIL, OR COMMIT WASTE ON THE INHERITANCE," LEST THEY "LEAVE TO THOSE WHO COME AFTER THEM A RUIN INSTEAD OF A HABITATION."

WE NEED YOUR INSIGHTS AND YOUR GUIDANCE, NOT ONLY AS TO THE NATURE OF THE PROBLEMS WE FACE, BUT AS TO THE PRACTICAL, ACHIEVABLE MEASURES WE MUST BE PREPARED TO TAKE BOTH AT THE NATIONAL AND INTERNATIONA LEVELS TO PRESERVE OUR BIOLOGICAL DIVERSITY; MEASURES BY WHICH WE CAN BEST PROTECT OUR NATURAL INHERITANCE AGAINST THE WASTE THAT THIS GENERATION OF TEMPORARY POSSESSORS HAS PROVEN ITSELF SO CAPABLE OF COMMITTING.

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[From the Washington Post, Dec. 7, 1981]

FUTURE IN A NUTSHELL

Scientists last week reported the creation—there is no better word—of a new bacterium, capable of metabolizing the toxic herbicide 2,4,5-T. What does that mean? It means there could be a big payoff: if the bacteria perform as expected, they will be able to decontaminate waste dumps and agricultural areas where the herbicide has been heavily sprayed. It should be possible to use this new organism together with the herbicide to gain the weed killer's useful impact without its harmful side effects. And the method for creating the bacterium should be usable in creating any number of others with equally unique appetites.

The achievement illustrates why it is so important to stop the world's accelerating loss of species. Scientists can find genes in nature's extraordinary divesity that are capable of doing almost anything. Using the techniques of genetic engineering, these can be selected and combined into useful new organisms. But scientists cannot design the genes themselves: for this they have to rely on nature. Nature's raw material—the 5 million to 10 million plant, animal and microbial species that inhabit the earth—is being lost at a ruinous rate.

Scientists calculate that one species becomes extinct every day. By the end of this decade, the rate is expected to reach 10,000 per year. By the year 2000, fully 20 percent of the species now on earth will have disappeared. There are many biologists and a few policy makers who are beginning to believe that this loss is the most dangerous trend on the already overcrowded list of global problems.

The species loss means the loss of genes with unlimited industrial, agricultural and medical applications. One species recently saved by the merest luck is a type of corn that is perennial—it will produce for years from a single planting. If that characteristic can be transferred to cultivated species of corn, the advantage could be immense. Yet it was almost lost: only a few thousand plants are known to exist, on a single hillside in Mexico.

Also being lost are the genes that confer resistance to disease, genes that permit adaptation to climate change and genes that would provide new food supplies, new drugs and resistance to ever-changing pest populations (remember the Medfly). The aggregate loss of thousands of species also means the eventual loss of entire habitats. This in turn, biologists believe, threatens the planet's environmental stability and therefore its ability to support life. Slowing the species loss will require an expensive international effort and a high level of cooperation between the developing countries—where the greatest number of species are found and where most are being lost—and the industrialized world. The importance of taking these steps hardly seems open to argument.

STATEMENT
Before the
ENVIRONMENT POLLUTION SUBCOMMITTEE
of the
SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE
by
D. Craig Bell, Executive Director
Western States Water Council
December 10, 1981

Members of the Subcommittee, I want to thank you for the opportunity to testify today concerning the Endangered Species Act. My name is Craig Bell. I am Executive Director of the Western States Water Council. The Council is an organization of representatives appointed by the governors of twelve western states; Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Texas, Utah, Washington, and Wyoming. My statement is intended to communicate the position of the Council regarding changes to the Act. This position statement was adopted by the Council on July 30 of this year.

The Western States Water Council has carefully considered the present administration of the Endangered Species Act as previously constructed and interpreted. While recognizing the value to the nation of protecting our endangered and threatened species, various member states of the Council have experienced serious problems with the Act which demonstrate critical flaws that require legislative and administrative remedies. The Endangered Species Act, as previously constructed and implemented, has in several cases thwarted effective state water resource development, and threatens to continue to do so in the future even as the western states' limited water resources become increasingly important in meeting essential national needs. Therefore, the Western States Water Council urgently requests that the 97th Congress of the United States carefully reconsider the provisions of the Act and its implementation, and seriously consider the following problems and recommendations for amending the Act and improving its administration to more effectively and efficiently meet express national goals.

CONGRESSIONAL PURPOSE

Problem: The Supreme Court in TVA v. Hill found that the legislative intent of Congress in enacting the Endangered Species Act of 1973 "was to halt and reverse the trend towards species extinction, whatever the cost." Congress evidently disagreed, and subsequently enacted amendments intended to provide the flexibility necessary to allow a balancing of endangered species values with other national needs. However, such measures have only partially achieved the intended flexibility.

Recommendations: Congressional purpose and policy should be redefined explicitly in Section 2 to state that the conservation of endangered species should not automatically be undertaken at all costs, but should be considered in concert with other national goals.

LISTING OF SPECIES AND DESIGNATION OF CRITICAL HABITAT

Problem: Delay and uncertainty with respect to the listing of species and designation of critical habitat have significant economic impacts which need to be more fully addressed by the Act. Further, such actions have been criticized in the past as based on political rather than scientific factors.

Recommendations: The listing of a species and the designation of its critical habitat should be effected promptly and concurrently, based on existing and readily available information. Further, a forum should be established wherein conflicts over judgements with respect to biological facts can be challenged and resolved. Adjustments could easily be made under the present promulgation process at such time as more accurate information became available. The two year time period provided between initial notice of a proposed listing and final publication of regulations should be reduced. Critical habitat should be designated by the Secretary only after providing ample opportunities for official state comment by the respective governor. Such designations should also follow the required economic impact statement.

RECOVERY

Problem: The Act provides that endangered or threatened species be protected from such natural factors as disease or predation. Recovery plans are to be prepared and implemented in order to stabilize threatened species populations without addressing the physical and economic feasibility of such recovery efforts.

Recommendations: The complete conservation of all endangered and threatened species is not physically or economically practicable. Therefore, some prioritization of recovery efforts is necessary within national fiscal constraints. The Act presupposes that there is a significant correlation between the protection of natural ecosystems and the conservation of endangered species. Such a correlation is unproven. Prior to making large investments in potentially expensive conservation efforts, such as land acquisition, other alternatives need to be considered.

STATE WATER LAW

Problem: Contrary to express Congressional intent, the Endangered Species Act has been used in the past to directly abrogate the supremacy of state water laws. For example, the Fish and Wildlife Service is presently using the Act in the Colorado River Basin to mandate instream flows, irrespective of the biological needs of endangered species.

Recommendation: The Western States Water Council strongly urges the Congress to specifically address this growing tendency of federal agencies to use environmental statutes to abrogate states' water laws. The Act should be amended to expressly state that the Act will not be used to allocate water, but such allocation will be accomplished under state laws.

INTERAGENCY COOPERATION

FEDERAL AGENCY ACTIONS

Problem: The Act mandates preservation of endangered and threatened species irrespective of primary agency purposes. Such a flat inflexible mandate precludes achievement of a reasonable balance between the value of threatened and endangered species and other important national needs.

Recommendation: Section 7 should be amended to qualify the present mandate and provide that primary agency purposes be given more weight.

CONSULTATION

Problem: Current formal consultation procedures exclude direct state and other non-federal participation. While informal consultation has been established, it is inadequate. The consultation process has sometimes been used by the Fish and Wildlife Service to intimidate other interests into accepting unreasonable delays by threatening jeopardy opinions.

Recommendations: The consultation process needs to be more clearly defined and restructured to provide direct input by non-federal interests directly affected by the relevant agency action. "Good faith" consultation should be more clearly defined. What constitutes initiation of formal consultation should be explicitly stated, and state or permit or license applicants should be allowed to directly request formal consultation.

JEOPARDY OPINION

Problem: The Secretary's opinion, rendered by the Fish and Wildlife Service as to the potential jeopardy or lack thereof due to an agency's proposed actions, has been routinely delayed by automatic extension of the consultation process. When finally rendered, such opinions have sometimes in the past lacked factual content and have superficially addressed reasonable and prudent project alternatives.

Recommendations: The Secretary's opinion should be promptly delivered within the 90 day statutory limit, except as mutually agreed by the agencies and relevant non-federal interests, and should be based on the best existing and readily available information. The Opinion should not be delayed pending the outcome of any required biological assessment. Again, some forum should be established to provide for challenges to scientific and biological claims of the Fish and Wildlife Service, as well as lead to a resolution of the differences and determination of the facts. Lastly, the Act should be amended to specifically allow at this stage for the implementation of reasonable and prudent alternatives mutually agreed to as a means of mitigating project impacts on threatened or endangered species, and thereby avoid jeopardy.

BIOLOGICAL ASSESSMENTS

Problem: Biological assessments have suffered from the same problems as the jeopardy opinions. They are often unreasonably delayed, and professional judgements leave room for reasonable disagreement. Further, the Interior Solicitor's Office has stated that such assessments should include consideration of a project's cumulative effects, which are difficult to determine. The latter has been used by the Fish and Wildlife Service to justify the issuance, or threatened issuance, of a jeopardy opinion where project impacts are negligible and a scenario including cumulative impacts of all future projects has not been, and possibly cannot be, reasonably determined.

Recommendations: Again, some forum should be provided to allow for the resolution of differences in professional judgement. However, such assessments must be promptly completed within the six month statutory limit, and decisions must be made based on the information gathered. Adequate funding is important to the quality of such assessments, but where fiscasl constraints preclude a totally comprehensive review, decisions must be made using the best readily available information. Review of a project's cumulative impacts, if appropriate, must be limited in scope and should not delay all development pending approval of an uncertain area-wide development scenario.

EXEMPTION PROCEDURE

Problem: It appears that the exemption process has not provided the flexibility and balance between environmental and economic values which Congress intended. To our knowledge only three projects have sought exemptions. The Grey Rocks project was approved with specific mitigating measures, the Tellico Dam project was disapproved for economic reasons (which disapproval Congress later overrode), and the Pittston Refinery project in Eastport, Maine is as yet unresolved. The exemption procedure is time consuming, cumbersome, imprecise and, rather than facilitate conflict resolution, may stonewall meaningful development.

Recommendations: Congress should explicitly state that consideration of exemptions should take place after meaningful consultation, within the statutory time period, has failed to resolve conflicts between the values established by the Act and project purposes. The exemptions should not be considered as a matter of last resort following protracted and meaningless discussion within a clouded context of differing interests, or after a particular project's compatibility with all other statutory requirements has been determined. Rather than delay decisions, the process should facilitate timely conflict resolution. To accomplish this objective the process needs to be more clearly defined and shortened to a reasonable period of time.

CONCLUSION

I appreciate very much the opportunity to testify on behalf of the Western States Water Council. I hope that the Council position might be helpful as the Subcommittee and Congress address these important issues in the 97th Congress.

STATEMENT OF

JAMES TATE, JR., Ph.D.
ENDANGERED SPECIES AD HOC COMMITTEE
WESTERN REGIONAL COUNCIL

BEFORE THE

SUBCOMMITTEE ON ENVIRONMENTAL POLLUTION
COMMITTEE ON ENVIRONMENT & PUBLIC WORKS
UNITED STATES SENATE

HEARINGS ON
THE ENDANGERED SPECIES ACT

WASHINGTON, D.C.
DECEMBER 10, 1981

Chairman Chafee and Members of the Subcommittee:

On behalf of the Western Regional Council, I would like to thank the Committee for the opportunity to testify on an issue of great importance to the Intermountain West -- the Endangered Species Act.

I am Dr. James Tate, Jr., Principal Environmental Coordinator, an ecologist for ARCO Coal Company and a member of the Western Regional Council's Endangered Species ad hoc Committee. I have been a coordinator on environmental matters for Atlantic Richfield Company since 1973. Prior to that time, I was an associate professor at Cornell University and Assistant Director at Cornell's Laboratory of Ornithology. I have worked for the National Audubon Society and served in advisory roles to the Nature Conservancy and other conservation organizations.

The Western Regional Council was organized to provide a unified voice for the business community in the Intermountain West. It is composed of the chief executive officers of corporations in the states of Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming. Major financial, utility, manufacturing, mining, and other industrial enterprises are represented on the Council. The Council works to establish balanced policies which consider the benefits of both economic development and environmental protection and provides a forum for the resolution of business problems on a regional basis.

I am here today on behalf of the WRC to discuss some of its preliminary findings as to how the Endangered Species Act could be made more effective. The WRC supports the basic concepts underlying the Endangered Species Act and finds that it is a law which is basically sound and fulfills its intent. The WRC is not here today to urge you to weaken the basic concepts of the Act. However, the Intermountain West has had working, hands-on experience with how the Act functions and that experience has led us to the conclusion that there are provisions in the Act which should be changed. We would hope that if the areas which we identify are revised, that the result would not simply be the conservation of species, but the bringing of listed species to population levels which would allow them to be removed from the list. That is, afterall, the ultimate goal of the Act.

The WRC thinks that as a western, regional organization of business entities it may be uniquely qualified to discuss the Endangered Species Act since the Act is, in many respects, a "western issue". Of the 133 endangered or threatened animals currently listed as having historic ranges in the U.S.A., 71 species, or 53%, are found only west of the Mississippi River. Of the 60 plants listed, 80% are found west of the Mississippi. Overall, 61% of the listed U.S. species are found in the West. These statistics, especially when considered in conjunction with the vast federal land ownership throughout the West and the concomitant federal actions invoking the ESA, clearly indicate that endangered species problems are of great concern to the Western states.

The WRC testimony is organized around a number of case studies which the WRC thinks delineate the problems the Intermountain West is having with the Act. Each of these is described in more detail in the appendix to this testimony. The case studies relate to four areas of the Act:

- the "critical habitat" concept;
- the lack of protection for parties who attempt

to apply experimental management techniques to endangered species;
- the Act's interaction with western state water law; and
- the consultation provisions of Section 7.

Before I begin, I should state that this testimony presents the Council's preliminary findings. The Council is not prepared, at this time, to recommend specific amendments to the Act. Rather, the Council's testimony will present areas of the Act which have caused problems in the Intermountain West. The Council hopes that its information will assist this Subcommittee in its drafting of any revisions to the Act.

The Critical Habitat Concept

The concept of identifying a critical habitat for a listed species is one which the WRC supports. However, the implementation of this concept has been unsatisfactory. The Department of Interior has consistently failed to designate critical habitats or has been incredibly slow to do so. Much of this inaction may be the result of a lack of personnel and funding to carry out this task. If the Act is to be effective, Congress must provide sufficient funding.

The Act currently provides that the Secretary of Interior "may" exclude any area from critical habitat if he determines that the benefits of such exclusion, including economic and other impacts, outweigh the benefits of specifying an area as critical habitat, unless he determines that the failure to designate such an area will result in the extinction of the species. This provision already allows the Secretary to weigh the costs and benefits of setting critical habitats. However, the WRC would like the Subcommittee to consider strengthening this provision so that the Secretary must (not "may") balance conflicting needs when setting critical habitat for a species. It is the WRC view that strengthening this provision would not weaken protection since; if such exclusion results in extinction of a species, an area could not be excluded from a critical habitat.

Finally, it is the WRC position that the implementation of the critical habitat provisions of the Act have failed to designate the "critical habitat" of endangered species in most of the cases where such a designation has been made. Critical habitat is defined as the physical, chemical, and biological factors which allow the organism to survive. Instead, suspected "ranges" (geographic areas in which the species might be most likely to occur) have been designated.

For example, in Bastrop County, Texas, in 1978, a critical habitat was designated for the Houston Toad. The critical habitat was actually a "range" which extended north as far as 30° 12' north latitude. The studies that were done for the BLM EIS on the Camp Swift Federal Property included the standard searches for the Houston Toad both inside and outside the critical habitat (range) for the species. In this instance, no toads were found. Any federal action in Bastrop County would have required the same baseline studies, both inside and outside the designated critical habitat. Therefore, the designation of a habitat, in this case was superfluous. The designation of critical habitat, in this case, neither helped protect or conserve the toad nor did it provide needed guidelines to the industry involved. (For a more detailed case study on the Houston Toad see the appendix to this testimony).

Critical habitat provisions of the act support the definition of habitat as the physical, chemical and biological factors which allow the organism to survive. The existing regulations require changes to bring them in line with the definition of habitat suggested above. The use of the concept of critical range has not worked to the benefit of endangered species and should be replaced with the concept of critical habitat as orginally conceived.

Experimental Populations

Individuals and populations of listed species are in many cases eminently suitable for manipulation and experimentation in methods to increase their populations and to eventually allow their removal from the list. The Peregrine Falcon has proven to be just such a species. The success story of this species' response to artificial insemination, rearing, and release in the wild is widely known. It has been recently predicted by Dr. Tom Cade, of Cornell University, one of the founders of this methodology, that Peregrine Falcon population will be sufficiently strong in the reasonably near future to allow it to be delisted.

This is a powerful statement in support of the concept that we should no longer view the best management technique for endangered species to be one of protection by setting aside refuges into which the actions of man will not penetrate. Instead, scientists have found many species to be remarkably pliable and subject to habitat and population manipulation techniques.

The Endangered Species Act does not currently allow sufficient flexibility so that concerned parties can participate in mitigation and management of impacts on endangered species. For example, should an endangered species be discovered at the site of a proposed development, the Section 7 consultation process will be invoked. We will comment further on the consultation process later on in this testimony. Here, however, we wish to make the point that should that species or population be subject to innovative management or manipulation as in the case of the Peregrine Falcon, the options of the agency or the applicant are limited or eliminated.

One of the attached case histories applies directly to this problem. In 1979, the Atlantic Richfield Company considered a proposal to introduce hand-reared Peregrine Falcons on Company controlled lands in central Colorado. The site under consideration was an active oil shale test facility located in a mountain valley ideally suited to the habitat needs of the species. ARCO considered the problem from several viewpoints. One consideration in the final decision was that no assurances could be found that the successful introduction of the species at this locality would not result in a violation of the ESA by continued operation of the facility.

A category of experimental populations should be added to appropriate portions of the law and regulations. This designation should be instituted to allow the agency and applicant to apply innovative experimental techniques without fear of the project being stopped should experimentation be successful.

Western Water Rights

One of the on-going problems with the Endangered Species Act in the Intermountain West has been the growing controversy between western water rights and the federal governments implementation of the Act. In the appendix to this testimony we have presented two case histories which delineate this problem - the Grayrocks Dam and Reservoir on the Laramie River in Wyoming and the Wildcat Creek Reservoir in Colorado.

Both of these cases involved the building of steam electric generating plants. Both of these cases also involved critical habitat of the whooping crane in Central Nebraska.

The impact of the Fish and Wildlife Service's position in both Grayrocks and Wildcat was to impact water quantity flows in one state for the benefit of the Platte River in Nebraska (another state) by considering a water quality issue (*i.e.*, dredge and fill permits). In reaching such a conclusion, the Service had to consider more than actual construction impacts; it had to hypothecate over the entire operational life of the facility, and/or the cumulative impacts of all other water development projects within the watershed above the habitat.

The practical result of such a position by the federal government was the creation of a "water right" at no cost to the Service. This issue was raised in the Grayrocks litigation but dismissed by Judge Urbon:

> The Corps is obviously not authorized to resolve water right controversies, and it does not purport by issuance of the permit to grant any entitlement vis-a-vis other parties to use of the water or disturb any previously held water rights. *Nebraska v. Rural Electrification Association,* CV76-L-242,
>
> (District Court Nebraska), Slip Opinion at 34, October 2, 1978.

This same question was also litigated by Public Service Company of Colorado in the Wildcat case and was remanded by the Tenth Circuit to the Trial Court to determine if the Corps of Engineers can regulate river flows by Section 404 permit conditions, see *The Riverside Irrigation District v. Stipo*, No. 80-2142 (C.A.10th, September 2, 1981).

A new approach by the Reagan Administration's Department of Interior in this area of "non-reserved federal water rights" is contained in a solicitor's opinion dated September 11, 1981, which concludes:

> Federal entities, including, without limitation, the National Park Service, Fish and Wildlife Service, Bureau of Reclamation and Bureau of Land Management, may not, without congressionally created reserved rights, circumvent state substantive of procedural laws in appropriating water. Rather, consistent with the express language in the New Mexico decision, federal entities must acquire water as would any other private claimant within the various states. (Ibid. at 12.)

It appears that a very significant impact of the ESA in the Western United States has arisen in the context of water development projects. It is also significant that all the western arid states have a variation of the "appropriation doctrine" to determine the use of water rights within their respective jurisdictions. In spite of a long history of Congressional deference to these priority systems, some agencies have used the ESA to acquire private property rights.

Efforts are ongoing, both in the courts and within some agencies, to stem this tide. However appropriate legislative changes would complement these other efforts. The preeminence of western water rights is an issue that has often united the West and has been consistently recognized by Congress in all major public land enactments and environmental statutes.

Section 7 Consultation

The Section 7 provisions of the Endangered Species Act results in the Act affecting the majority of projects built in the Intermountain West. Section 7(a)(2), specifically requires federal agencies to ensure that their actions do not jeopardize the continued existence of an endangered species or destroy or adversely modify a designated critical habitat. The steps in the consultation process are not well defined and are in need of revision. Problems related to each specific project vary so much that the process must be adaptive. However, the process should also be sufficiently defined so that industry can have timely input into project planning and decision-making.

The WRC would like to reiterate its views on critical habitat provisions and experimental populations. Revision of the Act in these two areas would certainly help make the Section 7 consultation process work more efficiently and would improve the Acts' ability to conserve species and to increase their populations to the level that they can be delisted.

There are two additional areas involving the consultation process which the WRC would like the Subcommittee to consider. In the Intermountain West, the Endangered Species Act is triggered an inordinate number of times because the majority of endangered species are located in the West, because of the amount of federal land located in the West, and because of the Section 7 language itself. It would greatly reduce the West's compliance burden, while still protecting endangered species, if the provisions of Section 7 could be limited to "major federal actions", that is, an action requiring an Environmental Impact Statement. There is some precedence for this since the National Environmental Policy Act (Section 102(c)) includes such a provision. A change in Section 7 language concerning critical habitat would also be of assistance to industry. The Subcommittee should consider including language which would refer to "significant" portions of critical habitat instead of any such habitat.

The appendix to this testimony contains a case study which delineates this problem. ASARCO, Inc. is conducting mineral exploration on a 2,950 acre claim group located in a very small part of the Cabinet Mountains Wilderness, in northwestern Montana. The Fish and Wildlife Service imposed three serious constraints on the project due to a determination that the exploration area had potential to contain grizzly bear denning and feeding sites. In 26 years of record-keeping, there have been no sightings of grizzly bear within the area of exploration. The costs of compliance to the company, so far, have been estimated to be 10% of the total project costs and the results of the study have substantiated past research that there is no documented evidence that one grizzly bear has fed, denned, or been in the project area.

This case points up the earlier WRC testimony regarding the definition of critical habitat, since ASARCO was required to carry out a detailed biological study of a minor portion of a grizzly bear range, not of its critical habitat.

This project would not have triggered Section 7 consultation if the WRC's suggestions were adopted. ASARCO's exploration is not a major federal action; a significant portion of a habitat was not affected; and, in fact, this case did not involve a critical habitat but rather a "range" of an endangered species.

It is the opinion of the WRC that the ASARCO case, and others like it, show that the Endangered Species Act is often used to delay project development, increase project costs, and open up the project to litigation. Unfortunately, these actions do not go one step toward conserving or protecting an endangered species. The abuse of the Endangered Species Act, through the Section 7 provision, does adversely affect industry. However, and most importantly, it is the endangered species which is ultimately hurt. The Endangered Species Act is severely weakened if its purpose to protect endangered species, is allowed to be subverted to other goals.

Conclusion

As stated in my introductory remarks, the WRC is not prepared, at this time, to propose specific amendments to the Act. Rather, the Council has attempted to identify a number of areas in the Act which we believe need revision and have presented case studies which hopefully delineate these problems. Revisions in these areas could result in a more efficient implementation of the Act while still giving support to the underlying concepts of the Act.

The WRC hopes that it is provided an opportunity to testify in 1982 when the Act comes up for reauthorization. At that time, we would be able to discuss specific proposed amendments and to provide more detailed case studies. Thank you for the opportunity to testify and for your consideration of the views of the WRC.

APPENDIX

to the

Statement of the

Western Regional Council

December 10, 1981

CASE STUDIES

The case studies included in this Appendix were compiled by the Western Regional Council. For further details, the companies or government entities involved may be consulted.

I.

Species:

Houston Toad (Bufo houstonensis)

Historic Range:*

U.S.A. (Texas)

Vertebrate Population Where Endangered or Threatened:*

Entire

Status:*

Endangered

Listed:*

October 13, 1970

Critical Habitat:*

Described at 50 CFR 17.95(d)

Special Rules:*

None

Case Study:

City of Bastrop facility siting study
Department of Interior Lignite Leasing Study

Approximate Dates:

1979

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*Items indicated with an asterisk are taken from 50 CFR 17.11, the Fish & Wildlife Service Listing of Endangered & Threatened Wildlife.

History:

The City of Bastrop, Texas planned to place a sanitary landfill on the nearby Camp Swift Military Reservation, in Bastrop County. However, the critical habitat, as published for the Houston Toad, overlaps part of the Military Reservation, and includes areas which were being considered as possible sites by the City. Its belief that the defined area constituted the critical habitat of the Houston Toad caused the City to limit its options to sites outside of that critical habitat.

In addition, the cities of Austin and San Antonio, and the Lower Colorado River Authority are seeking Interior Department approval to lease between 4,000 and 6,700 acres for surface mining of lignite on the Camp Swift Military Reservation, also, in part, possibly conflicting with the listed critical habitat.

During the spring of 1979, intensive surveys for the Houston Toad were conducted on areas both outside and inside the designated critical habitat area. No toads were discovered on the Camp Swift property, despite a three-month study (conducted by Dr. R.F. Martin of the Texas Memorial Museum at Austin). The fact that a critical habitat had been defined, however, did not eliminate or even mitigate the requirement of studying lands outside of that critical habitat. Area-wide studies were required exactly as they are required for any development in any area suspected of containing an endangered species where no critical habitat has been designated.

In addition, in this case, the designated critical habitat was, in actuality, simply a line drawn around areas of suitable habitat, but also including large areas of unsuitable habitat. The studies required not only found no Houston Toads outside of the designated critical habitat, but they found no Houston Toads in the large areas of "unsuitable habitat" within the designated critical habitat. In this instance, the designation of the critical habitat could arguably have had the effect of preventing the choice of the ecologically best location for the landfill.

The final report of the DOI contractors analyzing the designated critical habitat of the Houston Toad in Harris County, Texas recommended that studies be done on the habitat needs, microclimatic parameters, and ecology of the species, as suggested here. There is no evidence that a critical habitat (range) designation in any way benefits the species. On the other hand, there is evidence that that kind of designation can restrict the free choice of viable options. It may thus actually result in inadvertent damage to the species.

II.

Species:

American peregrine falcon (*Falco peregrinus anatum*)

Historic Range:*

Canada, U.S.A., Mexico

Vertebrate Population Where Endangered or Threatened:*

Entire

Status:*

Endangered

Listed:*

October 13, 1970
June 2, 1970

Critical Habitat:*

An area entirely within California, described at 50 CFR 17.95(b).

Special Rules:*

None

Case Study:

Atlantic Richfield Company consideration of a proposal to introduce an experimental population on property held by the Company.

Approximate Dates of Case Study:

1979

History:

The Atlantic Richfield Foundation was requested by The United Peregrine Society, Inc. to provide a grant which would help pay for permanent peregrine falcon breeding facilities. Construction of these facilities would have released contingent donations from other organizations and allowed the Society to accept an offer of five pairs of peregrines from

Mexico, for experimental breeding and population development purposes.

The American and Arctic subspecies of the peregrine falcon are classified as "endangered" in Colorado. The American subspecies is native to the region in western Colorado where the Atlantic Richfield Company holds substantial coal and oil shale reserves. Several wildlife surveys conducted in the vicinity of the Company's property have indicated that peregrines no longer inhabit these areas. However, if any signs of their presence were found, there could be serious repercussions on the Company's ability to develop the mineral properties.

The Endangered Species Act provides for exceptions to the prohibition of the destruction of rare and endangered species habitat where it can be shown that proposed operations will not operate to the disadvantage of that particular species. However, the Act does not provide for a situation in which a company might, by experimental methods, attempt to introduce and foster an endangered species on an operations site. There is no guarantee, in fact, that such a program would not actually jeopardize continued operations on the property. Thus, even though a company might be willing to provide breeding facilities, followed by possible introduction of the birds at the company's property, it is logically constrained from doing so. In this case, it is ironic that a strong consideration in ARCO's final decision not to attempt such a project was the fact that no assurances could be found that, should the introduction of the species prove successful, the continued operation of the facility would not then result in a violation of the Endangered Species Act.

III.

Species:

Whooping crane (Grus americana)

Historic Range:*

Canada, U.S.A., (Rocky Mountains, east to Carolinas), Mexico.

Vertebrate Population Where Endangered or Threatened:*

Entire

Status:*

Endangered

Listed:*

March 11, 1967
June 2, 1970

Critical Habitat:*

Described at 50 CFR 17.95(b)

Special Rules:

None

Case Study:

Public Service Company of Colorado construction of reservoir on Wildcat Creek, near Brush, Colorado.

History:

The Wildcat case study is closely tied to a preceding case, the Grayrocks Dam construction case, which represented one of the first clashes between the ESA and a western water project. The Grayrocks conflict arose in the context of the Missouri Basin Power Project near Wheatland, Wyoming. This was an effort to build a three-unit 1500 megawatt coal-fired steam electric generating plant, known as the Laramie River Station, by a number of cooperative electric companies, which was financed by the Rural Electrification Association (REA). The operator of this project, Basin Electric, in conjunction with a local irrigation district, had undertaken the construction of Grayrocks Dam and Reservoir on the main stem of the Laramie River about ten miles downstream from the power plant.

The REA had requested §7 (ESA) consultation with the United States Fish and Wildlife Service (Service), as well as the Corps of Army Engineers (Corps), during the preparation of an Environmental Impact Statement. The result of that process was a biological opinion based in large measure upon a solicitor's opinion that concluded the Service could consider the effects of all projects which can reasonably be expected to be in operation during the life of a specific project under consideration. The Service found that the cumulative impacts of Grayrocks and other projects, both on the North and South Platte Rivers (including the Pawnee Station, which is the subject of the Wildcat case) would likely adversely modify or destroy the critical habitat of the whooping crane in Central Nebraska, unless one of two alternatives was followed:

> (a) Basin Electric's replacement of 23,000 acre feet per year of water removed by the project; or
>
> (b) Establishment of an irrevocable trust for the whooping crane habitat of $7.5 million.

Wildcat

A second water right dispute between private interests and the Service arose from the construction of the first 500 megawatt unit at the Pawnee Steam Electric Generating Station by Public Service Company of Colorado, near Brush, Colorado. As part of that project, the utility had contracted with a local irrigation district to build a reservoir on Wildcat Creek, an intermittent tributary to the South Platte River about five miles from the power plant site. Public Service Company had determined that the project complied with the Corps' criteria (at 33 CFR §323.4-2), giving it a "nationwide permit" under that agency's §404 program (33 U.S.C. §1344), without the necessity of an application. A staff attorney of the Service requested that the

Corps look into this project.[1] Subsequently (partly as a result of the backlash to the decision in the Grayrocks litigation), the Corps initiated §7 consultation with the Service which concluded that the operation of the Wildcat Reservoir would likely impact the critical habitat of the whooping crane in Central Nebraska some 300 nautical miles downstream unless one of two mitigation alternatives were undertaken:

> (a) Replacement of 1,400 acre foot per year;
>
> (b) Improvement of the whooping crane's habitat in the 53-mile reach of the river in Central Nebraska, including water releases (presumably of a lesser volume), land acquisition and habitat manipulation, such as clearing and leveling of islands, burning or spraying of associated vegetation.

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[1] This attorney had formerly been associated with the Environmental Defense Fund during disputes before the Colorado Air Pollution Control Commission and the Environmental Protection Agency involving air quality permits for the Pawnee Station.

IV.

Species:

Grizzly bear (Ursus arctos horribilis)

Historic Range:*

Canada, Western U.S.A.

Vertebrate Population Where Threatened or Endangered:*

U.S.A.--48 conterminous states.

Status:*

Threatened

Listed:*

Listed:	March 11, 1967
Delisted:	October 13, 1970
Relisted:	July 28, 1975

Critical Habitat:*

None designated.

Special Rules [50 CFR 17.40(b)]:

Taking (except in self-defense, or in certain "nuisance" or research situations) is prohibited in the Lower 48 states, except that if not contrary to State law, 25 grizzly bears per year may be taken by hunting, in the Flathead National Forest, the Bob Marshall Wilderness Area, and the Mission Mountains Primitive Area of Montana.

Case Study:

ASARCO Incorporated: Mineral exploration at the Company's Rock Creek Project, Sanders County, Montana. (Cabinet Mountain Wilderness Area - U.S. Forest Service.)

Approximate Dates:

Mineral exploration has been continuous in the area since it began in 1963. The Endangered Species Act was invoked in 1979.

History:

In 1963, the Bear Creek Mining Company, the exploration arm of the Kennecott Corporation, discovered copper-silver mineralization in the Cabinet Mountains, located in northwestern Montana. Although about two-thirds of the mineralized area was subsequently included within the Cabinet Mountains Wilderness, Bear Creek continued its exploration activities, concentrating on that portion of the discovery area lying outside the wilderness boundaries. In the early 1970s, the property was acquired by ASARCO Incorporated, which continued actively exploring the claims. In 1979, ASARCO made the decision to extend its active exploration to that two-thirds of the claim block which lies inside the wilderness boundary.

It is a significant fact of this case study that, under the terms of the Wilderness Act, a mining claim is invalidated unless an actual discovery has been proven (as that term is used in the 1872 Mining Law), by midnight of December 31, 1983. If a discovery has not been proven by that time, ASARCO will lose its claims. (To "prove" a discovery requires extensive long-term exploration and definition of an orebody, even though in the usual sense of the word, the "discovery" was made when the claims were staked.)

Another important fact to be remembered in reviewing this case is that, due to the weather conditions of northwest Montana, the normal drilling season in the area is approximately five months (June-October). Thus, the logistics of an exploration operation must be very carefully planned, in order to have men and equipment in the right place, at the right time, and with the right permits. Because the exploration in this case is being done inside wilderness, additional constraints are imposed. Drill rigs must be carried to and from the exploration site by helicopter. Therefore, contracts must be negotiated (well ahead of drilling season, since competition for their services is usually intense) for the helicopters and pilots, and timing must be very carefully coordinated. Once those contracts and times have been set, delays can mean that men, equipment, and helicopters are sitting on the ground waiting, at the Company's expense, for undetermined periods before they can actually begin work.

In relating this history, ASARCO has emphasized that both U.S. Forest Service (USFS) and Fish & Wildlife Service (FWS) personnel have been very cooperative in working with the Company. Personnel limitations in the FWS, however, appear to have caused delays.

In February of 1979, well in advance of its planned 1979 drilling season, ASARCO initiated the process for obtaining the necessary approval of its plan of operations by the Forest Service. On April 2, 1979, the plan was approved by the Forest Service, subject to certain requirements and conditioned on certain occurrences, one of which was the successful completion of a Fish & Wildlife Service consultation. The Forest Service approval letter stated, with regard to the FWS review, "We expect it to be successfully completed in early June." Thus, because of the complex logistics referred to above, the Company continued making its plans and negotiating its contracts with drillers, helicopter services, and so on, for the 1979 season.

Unfortunately, the FWS approval, once completed in the Billings FWS office, had to be approved in the regional FWS office, located in Denver. It took its turn along with all other submittals which were in the regional office, and did not receive final approval until September 1. In early July, however, ASARCO decided, partly to keep its drilling contractors from leaving the project site, that the Company would file another operating plan with the Forest Service, one which would not require FWS consultation.

Under this second plan, the Company would commence drilling on an existing road outside the boundaries of the wilderness area, near the site where the drillholes had originally been planned, but actually in an area which had already been partially explored. This second plan of operations was approved, and two holes were drilled outside the wilderness, at an approximate cost to the Company of $60,000. Drilling was in progress in the second drillhole when, on September 1, the Company received notice that FWS had approved its first plan. (This second drillhole was immediately abandoned, and the Company has not ever gone back to the hole to complete drilling it.) The Company immediately moved the drillrigs about 1500 feet, to the originally planned site, and began drilling. Thus, at least from the Company's point of view, in spite of its best good-faith efforts to comply with permitting requirements, ASARCO was required to expend some $60,000 to drill two holes from which it derived minimal benefit.

When obtained, the USFS permit imposed 62 special management constraints on the project. Of these 62 constraints, three were due to the FWS determination that the exploration area has *potential* to contain grizzly bear denning and feeding sites. Among the wilderness-protection constraints were requirements such as helicopter-supported drilling, an (ASARCO-suggested) plan that groundcloths be spread under drillrigs to catch any oil leaks, and a requirement that all human waste be helicopter-transported out of the area. However, of the entire range of the 62 requirements imposed, ASARCO feels that the three constraints attributable to the FWS consultation have had the most severe impact on its exploration activities.

The first FWS constraint limited the drilling season to four months rather than the normal five months possible. Thus, 20% of the operating season was lost. The other two constraints imposed time restrictions upon when the Company could drill in certain portions of the project area. These constraints were imposed by the FWS, *acting as it is directed by the Endangered Species Act*, simply because the area in question has *potential* grizzly bear denning and feeding sites. In fact, in the 26 years of recordkeeping by the Forest Service, there have been *no* sightings of grizzly bear within the 2,980-acre ASARCO claim block. Apparently no one has *ever* seen a grizzly, or documented evidence that one has fed, denned, or even been in the project area, even before the recordkeeping process was initiated.

In order to deal with the constraints imposing time restrictions on when drilling could occur in certain portions of the project area, the Forest Service gave ASARCO the burden of proof to show that the bears were *not* there. ASARCO has hired Dr. Al Erickson, from the University of Washington, a wildlife biologist who is a recognized grizzly bear expert, to assist the Company. By the end of 1981, these studies will have cost the Company about $10,000. Ultimately, the grizzly bear studies will be a major cost item, estimated at approximately $85,000 at the present time. These studies, it should be remembered, are required even though no grizzly bear, and in fact, no sign of any grizzly, has been documented in the area, simply to prove that no grizzlies exist in the area of exploration.

In addition to Dr. Erickson's work, the Border Grizzly Project of the University of Montana, funded by the Forest Service, has spent some two years without success attempting, with baited meat, to trap a grizzly near the project area.

In considering this case study, two points stand out: (1) The very small size of the ASARCO project relative to the size of potential grizzly bear range in Montana, and (2) the relatively very high costs imposed of searching for bears, and of protecting potential denning and feeding sites while carrying on that search, in addition to the costly permitting and other delays and uncertainties. Finally, ASARCO has incurred substantial legal costs in defending a lawsuit brought by several conservation groups, which, following the District Court's judgment against the plaintiffs, has now been appealed to the District of Columbia Appellate Court.

Any grizzly bears in this general area would form part of the Cabinet-Yaak ecosystem, which comprises a total of about 1,118 square miles. The 2,980-acre ASARCO claim group makes up only 0.26% of that ecosystem area. In addition must be considered the fact that exploration activities are only carried out on a very small portion of the claim group itself, i.e., on a very small portion of that 0.26%. The Forest Service has estimated that ASARCO's activities have only impacted one-half acre.

The effect of the Act, in this case, has been to delay and possibly even to stop a legal and legitimate project. Whether its use has been in the best interests of the species involved, however, is questionable.

BEFORE THE
SUBCOMMITTEE ON ENVIRONMENTAL POLLUTION
OF THE
SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

STATEMENT OF
MICHAEL J. BEAN, ENVIRONMENTAL DEFENSE FUND
CONCERNING
REAUTHORIZATION OF THE ENDANGERED SPECIES ACT
DECEMBER 10, 1981

This testimony is presented on behalf of the twelve organizations identified below* in support of the reauthorization of the Endangered Species Act. The effectiveness of that Act is extremely important to each of these organizations and to the conservation community as a whole because its goal is fundamental to every conservation effort. That goal, quite simply, is to preserve future options for human welfare by preventing the avoidable loss of life forms whose unique genetic and chemical properties have been shaped by a myriad of forces over the millenia.

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* Environmental Defense Fund, World Wildlife Fund-U.S., Defenders of Wildlife, National Audubon Society, Center for Environmental Education, Natural Resources Defense Council, Greenpeace-U.S.A., Humane Society of the United States, Animal Protection Institute, the Wilderness Society, the Whale Center, and Fund for Animals.

Today's unparallelled threat to the diversity of life on earth and its potential consequences for human welfare are amply described in the testimony of the distinguished panel of scientists before this subcommittee. Accordingly, our testimony will focus on how the Endangered Species Act can best facilitate the effective conservation of plants and animals that are now, or may foreseeably become, in danger of extinction.

Some months ago, representatives of the organizations on whose behalf this testimony is presented and others met to consider how the Act could most effectively achieve its important goals. Mindful that Congress would soon examine the Act and aware that various amendments would likely be considered, we attempted to identify certain fundamental objectives to guide our collective effort and assist Congress in evaluating the Act and possible amendments. The objectives we identified are set forth in the document attached to this statement; our collective effort to attain them will include, among other things, regular publication of a newsletter for the members of this subcommittee and other members of Congress analyzing how attaining those objectives will make more effective the conservation of endangered and threatened species. The remainder of this testimony explains and amplifies those objectives.

First, we strongly urge that the protection of the Endangered Species Act continue to be available for all endangered or threatened animals and plants. It has sometimes been suggested that the Act should not apply to so-called "lower" forms of animal life, such as mollusks, crustaceans, and other invertebrates, or to plants. Such suggestions are premised upon considerations unrelated to the overriding goal of securing human welfare through the conservation of genetic diversity and should be rejected. As the testimony of the panel of scientists demonstrates, the opportunities for material advances in medicine, agriculture, industry, and science are as likely to be secured, if not more likely, through the preservation of the less familiar life forms as through the preservation of the better known. Indeed, not even aesthetic considerations dictate the sorts of distinctions suggested, as those familiar with the beauty of seashells, butterflies, and wildflowers well know. Accordingly, we urge that the Act continue to be potentially available for all plants and animals.

A second objective is that the Act provide an efficient means of listing species which are endangered or threatened for any reason, with such listings based upon the best available scientific and commercial data. In September of this year, the Interior Department solicited from the public recommendations concerning improvements that could be made in the administration of its endangered species program. The responses reflected a perception, shared to a surprising degree by both industry and the conservation community, that the process for determining the status of species should be more efficient and more expeditious.

A more expeditious listing process serves industry by reducing the period of uncertainty in which the status of a species remains unresolved. Right now, because of the 1978 amendments requiring local public meetings, local public hearings, economic assessments of critical habitat designations, and other procedures, well over a year typically elapses from the time a species is first proposed for listing until its final status is determined. Indeed, a large number of proposed listings have been withdrawn because compliance with these new procedural requirements could not be accomplished within the two-year deadline fixed by the statute.

Such prolonged uncertainty in determining the status of species serves neither industry nor the interests of the species whose very survival is in question. No one can say with certainty how many species are in fact in danger of extinction today or may become so in the foreseeable future, although the prevailing view is that there are substantially more species in both categories than are now recognized under the Act or that can be recognized under current listing procedures. Thus, because of the complexity of those procedures, we face the virtual certainly of losing species we never knew to be endangered -- and failing to protect species we never knew needed protection.

In our view, Congress should recognize, and the Act should reflect that there are two separate and quite distinct functions that must be performed. The first is to ascertain what species are in fact facing the threat of extinction. The second is to decide how much should be done to protect them and whether exceptions are warranted in particular cases. The former function should be based strictly upon an objective, scientific assessment of the biological status of the species in question. The latter, obviously, requires a balancing of environmental, economic, social, and other objectives. It is extremely important, however, that we keep these functions separate and not let our assessment of how much protection is economically desirable influence our determination of which species are in fact facing the threat of extinction.

Much of the delay and uncertainty that now accompanies the listing process arises from the fact that these two logically separate functions have often been merged. The 1978 amendments, though based in part on a GAO report which criticized the Fish and Wildlife Service for allowing economic -- and therefore political -- considerations to influence its listing decisions, actually make the listing process more vulnerable to such pressures. Thus, an administration that is more responsive to those pressures than to the objective, biological needs of species will list few, if any, species. Indeed, the current administration has yet to publish a final rulemaking or even a proposal to list any new species in the more than ten months of its existence.

A third set of objectives pertains to the very important role the states can play in the conservation of threatened and endangered species. In 1973 Congress declared that encouraging the states to develop and maintain conservation programs through federal financial assistance was key to safeguarding the nation's heritage in fish and wildlife. Congress was right; the role of the states was key then and it is key today. Yet the federal financial assistance to encourage the states to develop and maintain these programs has completely dried up. For the states to develop significant, long-term conservation programs, they cannot be faced with a roller coaster of federal assistance. While one cannot guarantee a fixed level of federal assistance to the states or anyone else for the indefinite future, it may be possible to provide a reasonable cushion against the peaks and valleys of the budget by linking the amount of money available to assist the states to the overall appropriation for the Act. We encourage the subcommittee to explore this possibility to insure a real partnership between the states and the federal government.

We also encourage Congress to recognize the right of states to enact and enforce laws more restrictive than the Act itself. Recently. a federal court voided a California conservation law because it was more restrictive than the Endangered Species Act.* Similar laws in New York and other states may also fall unless the Act is changed to allow such laws. If the states believe that more restrictive laws are desirable, the Endangered Species Act should not prevent them from enacting and enforcing those laws.

In 1973 Congress also sought to demonstrate the commitment of the United States to the worldwide protection of endangered species by authorizing limited financial and other assistance to conservation programs in other nations. Here too, the Act's promise is now being allowed to go unfulfilled. The international cooperation provisions of the Act are useful and important. These provisions do not need to be changed -- they need to be implemented. Accordingly, we urge this subcommittee, in the course of overseeing the implementation of this Act, to press vigorously for an accounting of what can, and is planned to be done under the Act's international cooperation provisions.

Another important set of objectives pertains to the duties imposed on federal agencies by Section 7 of the Act. In 1978, Section 7 was the major focus of the Senate's attention.

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*Fouke Company v. Brown, 463 F. Supp. 1142 (E.D. Cal. 1979).

Believing that the requirements of Section 7 were too inflexible, Congress in that year provided a mechanism whereby activities otherwise subject to Section 7 could be exempted from it. There was considerable uncertainty then as to how frequently a need to resort to the exemption process would arise. Three years later, we see that the exemption process worked smoothly for the two projects that gave rise to congressional concern in 1978 and that no other projects have gone through the process. Thus, we feel that the basic procedures and requirements of Section 7, in which the Fish and Wildlife Service and National Marine Fisheries Service issue biological opinions governing compliance by federal agencies with the duty to unsure against jeopardizing the survival of listed species, should remain unchanged.

As to the exemption process itself, if Congress is now inclined to change it, certain of its features should definitely be retained. In particular, we feel that exemptions should only be authorized for those actions for which there has been a good faith effort, through consultation, to avoid endangered species conflicts and for which there is a clearly demonstrated regional or national economic necessity and the absence of feasible alternatives. These determinations, we believe, should be made by a responsible administrative body of high level officials after public, impartial and comprehensive inquiry into the action and its feasible alternatives and provided that all reasonable measures to mitigate the effects of the exempted action are required to be undertaken.

A final feature of Section 7 that deserves mention is that it gives all federal agencies the authority, independent of their other roles or function, to carry out programs for the conservation of listed species. This authority has clearly been beneficial, particularly with respect to land management and public works related federal agencies. It should therefore be continued in the broad terms in which it is now stated.

Our remaining objectives can be succinctly summarized. First, because of the enormous citizen interest in endangered species preservation and the implementation of this Act, the significant opportunities for public participation in its implementation should be continued. The two most significant of these opportunities are the right to petition for the listing or reclassification of particular species and the right to initiate citizen lawsuits against those who violate or fail to enforce the Act. Secondly, because of the critical importance of habitat protection for species preservation, the Act should encourage as many means of habitat protection as are possible and should specifically retain federal habitat acquisition authority. Third, recently enacted amendments to the Lacey Act create a criminal penalty structure more stringent than that of the Endangered Species Act. Because violations of the Endangered Species Act are, by their very nature, among the most serious of wildlife law violations, the criminal penalty structure of that Act should be revised to bring it into conformity with the recent Lacey Act amendments.

If our commitment to the preservation of endangered species is serious and if we look upon it as an investment in future opportunities to improve our own welfare and that of future generations, then we must be willing to pay the price of that investment. Our final objective is, therefore, that the Act be adequately funded to insure that its purposes are effectively carried out, that it is rigorously enforced, and that the states are encouraged to develop effective complementary programs.

STATEMENT OF GOALS AND OBJECTIVES REGARDING THE REAUTHORIZATION OF THE ENDANGERED SPECIES ACT

Our goal is to secure a strong statutory base for the effective conservation of plants and animals that are now, or may foreseeably become, in danger of extinction, and to insure that the Endangered Species Act furthers the purposes and policies that it now articulates. To that end, we seek the following specific objectives in the reauthorization of the Act in 1982:

1. The protection of the Act must continue to be available for all endangered or threatened animals and plants.

2. The Act must provide an efficient means of listing species which, as now provided in the Act, are endangered or threatened for any reason, based upon the best available scientific and commercial data.

3. The Act must provide for adequately funded grants to states for the conservation of endangered and threatened

species, encourage cooperative agreements and management agreements between state and federal agencies, and recognize the right of states to enact and enforce laws more restrictive than the Act itself.

4. The Act must continue to provide for international cooperation in the conservation of endangered and threatened species, as currently provided in Section 8, as well as for the implementation of international conservation agreements.

5. The Act must continue to authorize the acquisition of habitat for endangered and threatened species.

6. The Act must continue to impose on all federal agencies a duty, independent of the other roles or functions of such agencies, to carry out programs for the conservation of listed species and such duty must continue to be defined broadly to include the use of all measures necessary to bring listed species to the point at which the protection of the Act is no longer needed.

7. The procedures and requirements of Section 7(a) relating to federal agency actions must remain unchanged.

The biological opinions respecting the compatibility of particular actions with such requirements must continue to be the responsibility of the U.S. Fish and Wildlife Service and the National Marine Fisheries Service and must be based strictly on biological considerations.

8. Exceptions to the requirements of Section 7(a) must only be authorized with respect to actions for which there has been a good faith effort, through consultation, to avoid endangered species conflicts and for which there is a clearly demonstrated regional or national economic necessity and the absence of reasonable alternatives, with such determinations to be made by a responsible administrative body of high level officials after public, impartial and comprehensive inquiry into the action and its possible alternatives, and provided that all reasonable measures to mitigate the effects of such actions are required to be undertaken.

9. The opportunity for meaningful public participation in the implementation of the Act through petitions for the listing of particular species and the initiation of citizen lawsuits must be preserved.

10. The Act must be adequately funded to insure that its purposes are effectively carried out, that it is rigorously enforced, and that the states develop effective complementary conservation programs.

11. The criminal penalty provisions of the Act must be strengthened to make them comparable to those of the Lacey Act as it is expected to be amended in 1981.

TESTIMONY OF KENNETH BERLIN
BEFORE THE ENVIRONMENTAL POLLUTION SUBCOMMITTEE OF THE ENVIRONMENT AND PUBLIC WORKS COMMITTEE OF THE UNITED STATES SENATE ON OVERSIGHT ON THE ENDANGERED SPECIES ACT

DECEMBER 10, 1981

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE, I AM COUNSEL AND LEGISLATIVE DIRECTOR FOR WILDLIFE FOR THE NATIONAL AUDUBON SOCIETY. I AM ALSO CHAIRMAN OF A COMMITTEE THAT IS COORDINATING THE ACTIVITIES OF A LARGE NUMBER OF GROUPS CONCERNED ABOUT THE REAUTHORIZATION OF THE ENDANGERED SPECIES ACT. I WOULD LIKE TO THANK YOU FOR GIVING ME THIS OPPORTUNITY TO TESTIFY ON BEHALF OF THE NATIONAL AUDUBON SOCIETY AND THE GROUPS LISTED BELOW* IN SUPPORT OF THE NEED FOR REAUTHORIZING A STRONG AND EFFECTIVE ENDANGERED SPECIES ACT.

EARLIER THIS MORNING, MICHAEL BEAN OF THE ENVIRONMENTAL DEFENSE FUND EXPLAINED ELEVEN PRINCIPLES DEEMED FUNDAMENTAL TO AN EFFECTIVE ENDANGERED SPECIES ACT BY THE GROUPS FOR WHICH I ALSO TESTIFY. LATER THIS MORNING, THIS SUBCOMMITTEE WILL HEAR A PANEL OF THREE DISTINGUISHED SCIENTISTS EXPLAIN THE SCIENTIFIC AND PRACTICAL BENEFITS OF PROTECTING NATURAL DIVERSITY IN GENERAL AND ENDANGERED SPECIES IN PARTICULAR. MY TESTIMONY WILL REPLY TO MANY OF THE CRITICISMS OF THE ACT RAISED BY INDUSTRY AND ECONOMIC INTEREST GROUPS.

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* HUMANE SOCIETY OF THE UNITED STATES, AUDUBON NATURALIST SOCIETY, ANIMAL PROTECTION INSTITUTE, NATIONAL PARKS & CONSERVATION ASSOC., MASSACHUSETTS AUDUBON SOCIETY, MONITOR INTERNATIONAL, FUND FOR ANIMALS, ENVIRONMENTAL DEFENSE FUND, WILDERNESS SOCIETY, DEFENDERS OF WILDLIFE, UNITED STATES SECTION OF INTERNATIONAL COUNCIL FOR BIRD PRESERVATION, SIERRA CLUB, CENTER FOR ENVIRONMENTAL EDUCATION

TAKEN TOGETHER, THE CRITICISMS FROM INDUSTRY OVER THE PREVIOUS TWO DAYS OF TESTIMONY RELATE TO THE FOLLOWING: (1) SECTION 7 AND ITS ECONOMIC IMPACT; (2) THE LISTING PROCESS AND THE ALLEGED NEED FOR ECONOMIC CONSIDERATIONS IN THAT PROCESS; (3) THE PROTECTION OF SPECIES ENDANGERED BY NATURAL RATHER THAN MAN-MADE CAUSES; AND (4) THE EFFECT OF THE ACT ON WESTERN WATER USE. IN THIS TESTIMONY, I WILL RESPOND TO INDUSTRY'S STATEMENTS IN EACH OF THESE AREAS.

I. SECTION 7 HAS WORKED REMARKABLY WELL

SECTION 7 PREVENTS ANY FEDERAL AGENCY FROM TAKING ANY ACTION THAT IS LIKELY TO JEOPARDIZE THE SURVIVAL OF A LISTED SPECIES OR ADVERSELY AFFECT ITS CRITICAL HABITAT. WHEN A POSSIBLE CONFLICT EXISTS BETWEEN A SPECIES AND A FEDERAL ACTION, THE FEDERAL ACTION AGENCY CONSULTS WITH THE FISH AND WILDLIFE AND/OR NATIONAL MARINE FISHERIES SERVICES AND ONE OR BOTH OF THESE SERVICES ISSUES A BIOLOGICAL OPINION STATING WHETHER THE ACTION WILL JEOPARDIZE THE SURVIVAL OF LISTED SPECIES. IF THE SERVICE FINDS JEOPARDY, THE ACTION AGENCY OR THE PROJECT SPONSOR CAN SEEK AN EXEMPTION FROM THE SECTION 7 PROHIBITIONS.

THE SECTION 7 PROCESS IS WIDELY MISUNDERSTOOD. ITS IMPACT ON ECONOMIC DEVELOPMENT HAS BEEN GROSSLY AND UNFAIRLY EXAGGERATED.

THE FIRST MISUNDERSTOOD FACTOR ABOUT SECTION 7 IS THE SCOPE OF ITS PROHIBITIONS. CONTRARY TO SOME COMMENTS ABOUT THE ACT, THE SECTION 7 JEOPARDY PROVISION APPLIES ONLY TO SPECIES, NOT TO INDIVIDUALS OF A SPECIES. THUS, BEFORE THE

FISH AND WILDLIFE OR NATIONAL MARINE FISHERIES SERVICE MAKES A JEOPARDY FINDING, IT MUST DECIDE THAT THE FEDERAL ACTIVITY WILL JEOPARDIZE THE SURVIVAL OF A LISTED SPECIES, NOT JUST THE SURVIVAL OF ONE INDIVIDUAL OF THE SPECIES. THE LIMITED NATURE OF SECTION 7 IS BEST SEEN FROM THE FACT THAT OF THE ALMOST 9,673 CONSULTATIONS WHICH WE KNOW THE FISH AND WILDLIFE SERVICE CONDUCTED DURING THE PAST THREE YEARS, ONLY IN 154 (1.6 PERCENT) OF THESE DID THE SERVICE FIND A SUFFICIENT CONFLICT BETWEEN THE SPECIES AND THE PROJECT TO MAKE EVEN A PRELIMINARY JEOPARDY FINDING. IN RECENT YEARS, FOR EXAMPLE, THE GOVERNMENT AND THE COURTS HAVE FOUND NO JEOPARDY WITH RESPECT TO MANY PROJECTS WITH IMPACTS ON INDIVIDUALS OF ENDANGERED OR THREATENED SPECIES. FOR EXAMPLE, THEY FOUND THAT A HIGHWAY AFFECTING BALD EAGLES NEAR COEUR D'ALENE, IDAHO, WHICH HAD POTENTIALLY SEVERE IMPACTS ON EAGLE HABITAT, DID NOT JEOPARDIZE THE SURVIVAL OF THAT SPECIES. WHILE ENVIRONMENTAL GROUPS HAVE NOT ALWAYS AGREED WITH ALL THESE DECISIONS, THE INCONTROVERTIBLE POINT IS THAT ADVERSE IMPACTS ON INDIVIDUALS OF A LISTED SPECIES WILL NOT ALONE STOP A FEDERAL ACTION.

ALSO MISUNDERSTOOD IS THE EXTENT TO WHICH SECTION 7 APPLIES TO PRIVATE LAND. IN PARTICULAR, CRITICS ARGUE THAT SECTION 7 STOPS ALL PRIVATE DEVELOPMENT ON AREAS DESIGNATED AS CRITICAL HABITAT. IN FACT, LIKE THE JEOPARDY CLAUSE, THE CRITICAL HABITAT CLAUSE APPLIES ONLY TO FEDERAL ACTION. THUS, NOTHING IN SECTION 7 APPLIES TO PRIVATE LAND USE UNLESS A FEDERAL ACTION IS INVOLVED.

IT IS ALSO INCORRECT THAT SECTION 7 IS INFLEXIBLE AND STOPS ECONOMIC DEVELOPMENT. RATHER, THE SECTION PROVIDES AN ACCOMMODATION BETWEEN ECONOMIC DEVELOPMENT AND SPECIES PROTECTION THROUGH AN EXEMPTION PROCESS, THE END RESULT OF WHICH IS BASED LARGELY ON ECONOMIC GROUNDS.

OF EQUAL IMPORTANCE TO THE EXEMPTION PROCESS, HOWEVER, IS THE FACT THAT SECTION 7 HELPS IDENTIFY, AND THEREFORE AVOIDS, CONFLICTS BETWEEN SPECIES AND ECONOMIC DEVELOPMENT. IF ADVERSE EFFECTS UPON A SPECIES ARE FOUND EARLY IN PROJECT PLANNING, THE PROJECT CAN OFTEN BE MODIFIED TO AVOID CONFLICT. THAT IS EXACTLY WHAT HAPPENS IN MOST CASES. IN FISH AND WILDLIFE REGION 7, FOR EXAMPLE, THE DIRECTOR WROTE THAT NINETY PERCENT OF POTENTIAL CONFLICTS ARE RESOLVED THROUGH INFORMAL CONSULTATION PROCEEDINGS. FORMAL CONSULTATION, EVEN THOSE LEADING TO JEOPARDY OPINIONS, RESOLVE CONFLICTS JUST AS SURELY. AFTER REQUIRING SLIGHT MODIFICATIONS IN THE PROPOSED PROJECT, THE FISH AND WILDLIFE SERVICE FOUND PROJECT SPONSORS COULD AVOID JEOPARDY WITH RESPECT TO PRELIMINARY OIL EXPLORATION IN THE BEAUFORT SEA, MINERAL EXPLORATION IN THE CABINET MOUNTAINS IN MONTANA, LEVEE CONSTRUCTION BY MCGEE CREEK LEVEE AND DRAINAGE DISTRICT, ILLINOIS AND IN MANY OTHER CASES. ATTACHED IS A SUMMARY OF NINE JEOPARDY OPINIONS ISSUED THROUGH OR BY THE HONOLULU OFFICE OF THE FISH AND WILDLIFE SERVICE SHOWING THE SUCCESSFUL RESOLUTION OF EACH POTENTIAL CONFLICT. WHEN SUCH ANALYSIS IS COMPLETE FOR ALL FISH AND WILDLIFE OFFICES, WE BELIEVE IT WILL SHOW SIMILAR RESULTS. THUS, WHILE ENVIRONMENTAL GROUPS OR INDUSTRY MAY DISAGREE OVER VARIOUS ASPECTS OF THESE

OPINIONS, THE FACT REMAINS THAT IN VIRTUALLY ALL CASES, PROJECT SPONSORS HAVE SUCCESSFULLY MODIFIED THEIR PROJECTS TO AVOID CONFLICT WITH ENDANGERED OR THREATENED SPECIES.

TURNING TO THE DIRECT ECONOMIC IMPACT OF THE SECTION 7 PROCESS, OUR ANALYSIS OF SECTION 7'S ECONOMIC IMPACTS AND THAT OF THE DEPARTMENT OF THE INTERIOR ARE PRELIMINARY. INITIAL DATA REVEALS THAT FROM FY 1979 TO 1981 THERE WERE 7,494 INFORMAL AND 2,179 FORMAL CONSULTATIONS UNDER SECTION 7. AS PREVIOUSLY INDICATED, 154 OF THESE, OR APPROXIMATELY 1.6 PERCENT, LED TO AT LEAST A PRELIMINARY JEOPARDY FINDING. VIRTUALLY ALL OF THESE JEOPARDY OPINIONS LED TO ALTERATIONS OF THE PROJECT ACCEPTED BY THE PROJECT SPONSOR. FOR EXAMPLE, IN FISH AND WILDLIFE SERVICE REGION 6, OCCUPYING EIGHT WESTERN STATES, NONE OF THE 26 JEOPARDY OPIONIONS ISSUED IN FY 1979-1981 STOPPED PROJECTS. IN ADDITION, THE ACTING REGIONAL DIRECTOR WROTE THAT "WE BELIEVE THAT THERE HAVE BEEN FEW INSTANCES IN REGION 6 WHERE PROJECTS HAVE BEEN DELAYED SOLELY BECAUSE OF THE ENDANGERED SPECIES ACT. IN MOST CASES THERE HAVE BEEN OTHER PROBLEMS THAT WOULD HAVE DELAYED THE PROJECTS EVEN IF THE ENDANGERED SPECIES ACT DID NOT EXIST." IN NO CASE ANYWHERE IN THE COUNTRY HAS A PROJECT SPONSOR SOUGHT AN EXEMPTION DURING THE LAST THREE YEARS.*

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* IN ONE CASE A PROJECT SPONSOR APPLIED FOR AN EXEMPTION, BUT A COURT RULED THAT THE APPLICATION WAS PREMATURE.

FINALLY, CONTRARY TO EARLIER TESTIMONY, THE SECTION 7 CONSULTATION PROCESS DOES NOT UNDULY DELAY PROJECTS. THE ACT PROVIDES THAT THE RELEVANT SERVICE MUST COMPLETE CONSULTATION WITHIN 90 DAYS. A RECENT NATIONAL WILDLIFE FEDERATION STUDY OF MORE THAN 600 CONSULTATIONS SHOWS AN AVERAGE CONSULTATION TIME PER OPINION OF 78 DAYS (2.6 MONTHS). AGAIN, A CAREFUL REVIEW OF THE FACTS REVEALS THE ACT IS WORKING SMOOTHLY, EXACTLY AS CONGRESS INTENDED.

TO CONCLUDE, EVEN BY THE MOST CONSERVATIVE STANDARD OF ECONOMIC REVIEW, A STATUTE IS REMARKABLY SUCCESSFUL IN FINDING THE PROPER BALANCE BETWEEN ECONOMIC GROWTH AND ENVIRONMENTAL PROTECTION IF IT PROTECTS SPECIES, WITHOUT STOPPING PROJECTS OF ECONOMIC IMPORTANCE. THE ENDANGERED SPECIES ACT HAS SUCCEEDED IN WALKING THAT TIGHTROPE. IN MANY CASES OF CONFLICT BETWEEN THE SPECIES AND THE PROJECT, THE SPONSOR HAS MODIFIED THE PROJECT TO PROTECT THE SPECIES. WHILE THAT MIGHT MAKE THE PROJECT SOMEWHAT MORE COSTLY, THE ACT IS WORKING IF IT DOES NOT MAKE THE PROJECT UNECONOMICAL. AS THE TESTIMONY OF THE SCIENTIFIC EXPERTS PRESENT HERE TODAY WILL ESTABLISH, THE AVOIDABLE LOSS OF SPECIES MAY CAUSE INCALCULABLE ECONOMIC AND OTHER DETRIMENT TO HUMANITY. THE EXTRA COST TO A PROJECT SPONSOR FOR PROTECTING SPECIES MERELY INTERNALIZES A FRACTION OF THAT COST. MOREOVER, THE ACT PROVIDES AN ULTIMATE EXEMPTION FROM ITS PROHIBITIONS IF THE PROJECT CANNOT BE ALTERED AND IF IT IS OF SUFFICIENT ECONOMIC IMPORTANCE.

II. ECONOMICS SHOULD NOT ENTER INTO THE LISTING PROCESS

MICHAEL BEAN HAS JUST TESTIFIED ABOUT THE LISTING PROCESS. HE STATED THAT WE OPPOSE ANY EFFORTS TO INCLUDE ECONOMIC CONSIDERATIONS IN THE LISTING PROCESS. WITHOUT REPEATING THAT TESTIMONY HERE, I WILL ONLY EMPHASIZE THAT THE ECONOMIC EFFECT OF THE ACT CAN BE CONSIDERED EITHER AT THE LISTING, PROJECT INITIATION OR EXEMPTION STAGE OF THE ACT'S PROCEDURES. CURRENTLY, ECONOMICS ARE NOT CONSIDERED IN DETERMINING WHETHER TO LIST A SPECIES, BUT ARE CONSIDERED DURING THE EXEMPTION PROCESS, WHERE THE CONSIDERATION SHOULD REMAIN. IF ECONOMICS WERE ALSO CONSIDERED AT THE LISTING STAGE, THE GOVERNMENT WOULD HAVE TO WEIGH HYPOTHETICAL ECONOMIC EFFECTS AGAINST THE UNKNOWN VALUE OF A SPECIES, AN IMPOSSIBLE TASK. AT THAT STAGE, THE GOVERNMENT COULD ONLY HYPOTHETICALLY CONSIDER WHETHER PROJECTS SPONSORS COULD MODIFY HYPOTHETICAL PROJECTS TO AVOID CONFLICTS. WE REGARD THIS SEARCH FOR ALTERNATIVES AS AMONG THE MOST IMPORTANT PROCESSES IN THE ACT, BUT IT IS A PROCESS THAT THE GOVERNMENT CANNOT CONDUCT IN THE ABSTRACT. IN CONTRAST, BY THE TIME THE EXEMPTION PROCESS BEGINS, THE SPONSOR HAS IDENTIFIED ALL ALTERNATIVES, IF ANY, AND THE ECONOMIC VALUE OF THE PROJECT HAS CRYSTALLISED. AT THAT POINT, AN EXEMPTION PROCESS BASED ON THE ECONOMIC IMPORTANCE OF THE PROJECT, THE FAILURE TO IDENTIFY REASONABLE ALTERNATIVES AND THE POSSIBILITY OF MITIGATING IMPACTS, AT LEAST CAN BE CONDUCTED INTELLIGENTLY.

III. SPECIES THREATENED BY NATURAL CAUSES MAY BE JUST AS VALUABLE TO HUMANS AS THOSE THREATENED BY MAN

THE FOREST PRODUCTS ASSOCIATION HAS SUGGESTED THAT THE

PROTECTION OF THE ACT APPLY ONLY TO SPECIES THREATENED BY HUMAN ACTIVITY. BY EXCLUDING SPECIES NATURALLY ENDANGERED, THE ASSOCIATION SHOWS A FUNDAMENTAL MISUNDERSTANDING OF WHY WE PROTECT SPECIES. OUR SUPPORT OF SPECIES PROTECTION IS BASED ON THE UTILITARIAN VALUE OF SPECIES AS A NATURAL RESOURCE ON WHICH WE DEPEND FOR FOOD, MEDICINE, OXYGEN, CLEAN AIR AND WATER, ENERGY, BUILDING MATERIALS, CLOTHES, PSYCHOLOGICAL WELL-BEING AND COUNTLESS OTHER BENEFITS. THOSE BENEFITS ARE JUST AS GREAT IF THE SPECIES IS ENDANGERED BY NATURAL OR MAN-MADE CAUSES. MOREOVER, IT WOULD BE ADMINISTRATIVELY IMPOSSIBLE TO DETERMINE WHEN HUMAN ACTIVITIES BEGIN TO AFFECT A SPECIES, AND IN ALMOST ALL CASES HUMAN ACTIVITY BEGINS TO PLAY A ROLE EVENTUALLY.

IV. THE ACT HAS NOT ADVERSELY AFFECTED WESTERN WATER USE

A NUMBER OF ORGANIZATIONS HAVE TESTIFIED THAT THE ACT UNDULY INTERFERS WITH WESTERN WATER USE. THEY ARGUE THAT THE ACT SHOULD CONTAIN A PROVISION, SIMILAR TO SECTION 101(G) OF THE CLEAN WATER ACT, WHICH PROHIBITS INTERFERENCE BY THE ENDANGERED SPECIES ACT IN WESTERN WATER ALLOCATION. SUCH ARGUMENTS IGNORE FUNDAMENTAL DIFFERENCES BETWEEN THE ACTS AS WELL AS EIGHT YEARS OF IMPLEMENTATION OF THE ENDANGERED SPECIES ACT.

WESTERN WATER INTERESTS ARGUE THAT SECTION 101(G) OF THE CLEAN WATER ACT IS DESIGNED TO INSURE THAT WATER QUALITY CONCERNS NOT BE USED TO JUSTIFY CONTROL OVER WATER QUANTITY USE IN THE WEST. WHILE WE DO NOT BELIEVE SUCH A DISTINCTION CAN OR SHOULD BE MADE, ARGUABLY THE WEST CAN CONTROL WATER

QUALITY USING TRADITIONAL POLLUTION CONTROL DEVICES.

THE ENDANGERED SPECIES ACT, OF COURSE, SERVES AN ENTIRELY DIFFERENT PURPOSE. IT PROTECTS SPECIES FROM EXTINCTION, INCLUDING THOSE FULLY DEPENDENT ON WATER IN THE WEST. THUS, UNLIKE THE CLEAN WATER ACT, WHERE THE GOALS OF THE ACT CAN ARGUABLY BE ACHIEVED WITHOUT REGULATING WESTERN WATER QUANTITY, THE ENDANGERED SPECIES ACT CANNOT STOP EXTINCTIONS OF WATER DEPENDENT SPECIES IF THERE IS AN INADEQUATE FLOW OF WATER AVAILABLE TO THEM.

EQUALLY IMPORTANT, THERE IS NO ECONOMIC JUSTIFICATION FOR SUCH EXTINCTIONS. AS PREVIOUSLY INDICATED, THERE ARE NO EXAMPLES IN FISH AND WILDLIFE SERVICE REGION 6, THE PRINCIPAL WESTERN REGION, OF THE SECTION 7 PROCESS EITHER UNDULY DELAYING OR STOPPING A PROJECT. FISH AND WILDLIFE SERVICE DATA HAS NOT IDENTIFIED A SINGLE WESTERN WATER PROJECT STOPPED BY THE ACT.

EVEN IF THE ACT'S PROVISIONS PROVE INCOMPATIBLE WITH A WESTERN WATER USE, THE EXEMPTION PROCESS PROVIDES FOR THE COMPLETION OF ANY WESTERN WATER PROJECT OF SUFFICIENT ECONOMIC VALUE.

TO CONCLUDE, THE ENDANGERED SPECIES ACT SETS FORTH A NATIONAL GOAL OF PROTECTING SPECIES FROM EXTINCTION. THERE IS NO GREATER ECONOMIC REASON TO DROP THAT GOAL WHEN WESTERN WATER USE IS INVOLVED THAN WHEN ANY OTHER USE IS AFFECTED. IN THE FINAL ANALYSIS, THE ACT WILL NOT STOP ANY WATER PROJECTS OF ANY REAL ECONOMIC VALUE.

V. OTHER CRITICISMS

I WILL NOT AT THIS TIME RESPOND TO CRITICISMS RELATING TO INEFFICIENCIES IN THE ACT OR TO PROVISIONS THAT APPEAR TO CONTRADICT EACH OTHER, EXCEPT TO SAY, OF COURSE, THAT THE CONGRESS SHOULD ELIMINATE ANY SUCH REAL PROBLEMS AND THAT WE ARE WILLING TO HELP RESOLVE SUCH ISSUES. I ALSO WILL NOT AT THIS TIME RESPOND TO THE AMENDMENTS SUGGESTED BY THE INTERNATIONAL ASSOCIATION OF FISH AND WILDLIFE AGENCIES OTHER THAN TO STATE THAT EACH OF THE GROUPS ON WHOSE BEHALF I AM TESTIFYING IS CONSIDERING ITS RESPONSE TO THESE AND THAT WE WILL NOTIFY THE COMMITTEE STAFF OF ANY VIEWS NOT ALREADY EXPRESSED AS SOON AS POSSIBLE.

VI. CONCLUSION

A CAREFUL AND DISPASSIONATE ANALYSIS OF THE ACT REVEALS THAT CRITICISMS ARE BASED ON EITHER A MISUNDERSTANDING OF THE ACT, A MISSTATEMENT OF THE FACTS, OR A BELIEF THAT THE ACT IS NOT WORKING IF IT RESULTS IN ANY ECONOMIC COSTS, EVEN IF THOSE COSTS DO NOT STOP A PROJECT FROM CONTINUING PROFITABLY. RATHER THAN RAISING UNDUE COSTS TO SOCIETY, THE ENDANGERED SPECIES ACT HAS SUCCEEDED REMARKABLY WELL IN PROTECTING THE ENVIRONMENT WITHOUT SERIOUSLY DISRUPTING ECONOMIC ACTIVITY.

THANK YOU.

ATTACHMENT 1

ATTACHMENT

PACIFIC ISLAND ADMINISTRATOR

I. Listed below are summaries of jeopardy biological opinions issued through or by the Honolulu Office. Data on these opinions is given in the following format:

   a. Consultation Number
   b. Consulting Agency
   c. Project Description and Location
   d. Point of Jeopardy
   e. Monetary Magnitude of Project
   f. Resolution

1. a. 1-2-78-F-88
   b. ASCS (USDA) - Forestry Incentive Program
   c. Keauhou-Kilauea, Hawaii; Establishment of a koa plantation on private lands funded, in part, by the ASCS
   d. Establishment of a monotypic, single age-class stand would jeopardize endangered forest birds and one listed plant
   e. Less than $1,000,000
   f. The funding applicant selected an alternate site for planting.

2. a. 1-2-78-F-86
   b. COE
   c. Lake Susupe - Chalan Kanoa Flood Control Project, Saipan; Design and construction of a flood control project
   d. Water level fluctuations effects on endangered birds; effects of construction on nesting
   e. $1-10 million (about $3 million)
   f. Mitigation in the form of habitat enhancement was incorporated into the project design; this removed jeopardy.

3. a. 1-2-79-F-43
   b. USFS (USDA)
   c. USFWS Permit application for forest bird research on 13 species to be done by USFS; Hawaii, Oahu, and Kauai, Hawaii
   d. Some of the species involved would be jeopardized by the permit activity (capture and banding)
   e. Less than $1 million
   f. Number of species investigated was reduced.

4. a. 1-2-79-F-107
   b. COE
   c. Lava Flow Control Project, Island of Hawaii, Hawaii
   d. Construction of flow barriers would decrease habitat of various listed forest birds
   e. $1-10 million (about $2 million)
   f. Diversion barriers would be constructed only when flow damage to property is forecast, an alternative presented in the opinion

5. a. 1-2-80-F-13
   b. COE
   c. Application for a permit to fill a wetland for a radio tower near Chalan Piao, Saipan

   d. Collision with the antenna and guy wires would jeopardize the Marianas mallard
   e. Less than $1 million
   f. For reasons other than endangered species, the application was withdrawn.

6. a. 1-2-80-F-15
   b. U.S. Army
   c. Routine Army training activities at the Pohakuloa Training Area, Island of Hawaii, Hawaii and impacts on three listed plants.
   d. Fires possibly started by training activities may destroy the plants in question
   e. Less than $1 million
   f. Construction of firebreaks, development of stronger firefighting capability, and stricter enforcement of Army fire regulations were implemented.

7. a. 1-2-81-F-204
   b. COE
   c. Application for a permit to fill wetland; construction of a marine shrimp farm, Oahu, Hawaii
   d. Destruction of endangered waterbird habitat.
   e. Less than $1 million
   f. Minor changes in the project design eliminated the jeopardy situation.

8. a. 1-2-81-F-207
   b. EPA
   c. Construction of the Wailuku-Kahului Wastewater Treatment and Disposal System on Maui, Hawaii
   d. Use of injection wells might possibly raise the water level in nearby waterbird refuge, flooding nests and, thereby, jeopardizing listed species.
   e. Less than $1 million
   f. A water level monitoring program was designed into the project.

9. a. 1-2-81-F-211
   b. U.S. Army
   c. Training exercises at the Pohakuloa Training Area, Island of Hawaii, would jeopardize three listed plants and one listed bird.
   d. Mechanical destruction and fires may damage plants and the habitat of the listed bird.
   e. Less than $1 million
   f. Proper fire control and orders against destruction of vegetation removed jeopardy.

II. Outline of conflict cases; reasons for conflict and resolutions.
There have been no irresolvable conflicts. Those projects that appeared to be the least compatible with listed species (1-2-79-F-107 and 1-2-80-F-13) were not begun for reasons other than endangered species.

III. List of all projects delayed by the Section 7 process:
There were no projects delayed solely because of Section 7 conflicts. Long delays in some projects (with matching delays in Section 7 resolution) were due to factors other than listed species concerns.

Statement given to U.S. Senate Subcommittee
on Environmental Pollution with reference to
the Endangered Species Act, 10 Dec. 1981.

TOWARD A LASTING CONSERVATION ETHIC

By Edward O. Wilson
Baird Professor of Science, Harvard University

In reflecting on the preservation of species and genetic diversity, it is worth remembering that a butterfly is far more complicated than any machine ever constructed by man. And because of the microorganisms living in it, a cubic inch of Virginia soil contains more structure and provides greater opportunities for scientific advance than the entire surface of Jupiter. When these comparisons are expanded to include the three to ten million species that comprise the whole biota, the magnitude of Earth's living treasury literally exceeds our imaginative capacity. Scientists have documented the vast opportunities offered by species variation for the development of new crops, drugs, and renewable energy sources. Others have demonstrated the vital role of rich, stable ecosystems in the regeneration of oxygen and its maintenance. But there is a great deal more to organic diversity than these utilitarian considerations.

The great German zoologist Karl von Frisch once said that the honeybee is like a magic well: the more you draw from it, the more there is to draw. And so it is with any species, which is a unique configuration of genes assembled over thousands or millions of years, possessing its own biology, mysteries, and still untested uses for mankind. Only a tiny fraction of the millions of species, less than 0.01 percent, have been studied in any detail; most have not even been given a scientific name.

Last year I was one of the faculty members asked by Harvard Magazine to give my opinion concerning the most serious problem of the Eighties. I rephrased the question in the following form: What event likely to occur in the 1980s will our descendants most regret, even those living a thousand years from now? The relatively unconventional opinion I gave was the following. The worst thing that can happen--*will* happen--is not energy depletion, economic collapse, limited nuclear war, or conquest by a totalitarian government. As terrible as these catastrophes would be for us, they can be repaired within a few generations. The one process ongoing in the 1980s that will take millions of years to correct is the loss of genetic and species diversity by the destruction of natural habitats. This is the folly our descendants are least likely to forgive us.

The bleeding of diversity is greatest in the moist tropical forests, but it is also occurring at an unknown rate in the United States. We should keep in mind that extinction is accelerating not only in birds and mammals, but also in such forms as mosses and insects. These organisms receive little attention but are magic wells nonetheless, the importance of which may not be appreciated for generations--when it will be too late.

It seems reasonable to suggest that:

- A deeper conservation ethic can and should be promoted that recognizes the uniqueness, extremely ancient history, and potential importance of every species, however obscure and insignificant it may happen to appear at this stage of scientific knowledge and public acceptance.

- Each rare and endangered species should be treated as part of the national heritage, no less than American history and the finest products of our culture.

- By its example the United States should provide world leadership in promoting a more enduring conservation ethic reflected in the protecting of all of its endangered species.

Testimony by Dr. Thomas Eisner, Division of Biological Sciences, Cornell University, Ithaca, N.Y. before the Subcommittee on Environmental Pollution of the Senate Committee on Environment and Public Works, on the occasion of hearings on the Endangered Species Act, December 10, 1981.

My name is Thomas Eisner. I am the Jacob Gould Schurman Professor of Biology at Cornell University. I am a member of the National Academy of Sciences, and the elected chairman of the Section of Biology of the American Association for the Advancement of Sciences, the largest scientific organization in the United States.

I am a research biologist in the field of chemical ecology. My interest is the chemistry of nature. For over twenty years my collaborators and I have been isolating, identifying, and studying the biological properties of new chemical substances derived from animals and plants.

What is an endangered species to the research biologist? Why do those of us who work on the chemistry of animals and plants, and who can envision the benefits to be derived from such research, feel that there is such a compelling need to protect endangered species?

The problem we are facing is, of course, one that needs to be viewed on a broader scale. The endangered species - the very fact that there should be endangered species in this world of ours - is symptomatic of the increasingly endangered status of nature itself. At a rate unprecedented, in the nation and throughout the world, we are encroaching upon nature. Species are endangered because wilderness is endangered. Species are disappearing because their habitats are disappearing.

It is not my intent here to address myself to the magnitude of the problem, staggering as it is: by the end of the century fully one million species of animals and plants will have become extinct. Nor do I wish to address myself to the need for an environmental ethic, essential as I feel that such an ethic is if the erosion of nature is to be halted.

What I would like to do is to focus specifically on some of the practical consequences of species extinction. What benefits do we stand to lose, both foreseeably and potentially, if we do not somehow stem the tide of extinction? Why, in the view of the research biologist, and specifically in the view of the chemical ecologist, is preservation of biological diversity an issue of such practical importance?

Let me deal with some foreseeable consequences first. Species extinction means restriction of biological diversity. And restriction of diversity means restriction of the chemical treasure of nature. Let us not lose sight of our enormous dependence on this treasure. A large proportion of the chemicals in use in our present-day civilization were "invented" by nature, not by the chemist in the laboratory. Take just one example: medicinal chemistry. It has been estimated that fully 40% of all prescriptions written in the United States contain as their chief ingredients compounds derived from plants, including lower plants. It was through exploration of nature that these drugs were discovered. And such exploration has a long history of paying off. The Incas already knew of the antimalarial properties of the bark of the cinchona tree, from which quinine was later isolated, and the foxglove plant, the well-known source of the heart drug digitalis, was already in medicinal use in medieval times. But many of the most interesting plant drugs in current use were only recently discovered, including for example some of the antileukemic compounds, and anticancer drugs such as vincristine, used in the treatment of Hodgkin's disease. There is in fact no end to the potential for discovery in nature, because we have only begun the chemical exploration of nature. Two of the compounds that I mentioned by name, quinine and vincristine, belong to that major class of chemicals called alkaloids. Thousands of alkaloids are now known, including many that have practical uses. Yet witness the fact that only about 2% of the flowering plants - 5,000 of some one-quarter million species - have been tested for presence of alkaloids. The majority of these compounds are still unknown, locked away in the unexplored world of plants. And we are essentially no better informed about the natural distribution of the other major types of organic compounds. There is indeed no end to the potential for exploration in nature, providing wildlife and wilderness are preserved.

Organic chemistry, the discipline that deals with the isolation and characterization of natural products, has made extraordinary progress in recent times. Great simplification has occurred in the procedures by which natural products are isolated from the complex mixtures in which they occur in nature, and minute amounts of a substance often suffice for its complete elucidation. To home in on the chemical unknowns of nature is now a less laborious task than it used to be, and the prospects for discovery are at an all time high. Yet even with accelerated exploration (an impossibility at current funding levels for basic research) the increased rate of discovery could not possibly keep pace with the rising tide of species extinction. Unless the erosion of nature is halted, much of what is now unknown will vanish before it is known. I find this prospect utterly disconcerting!

Dr. Thomas Eisner

Please note that I have emphasized the importance of plants as depositories of useful chemicals. Plants are the source of most natural products in human use, and doubtless the source of vast numbers of additional chemicals yet unknown. Their diversity must be preserved and they must be ruled eligible for protection. And the same holds for the invertebrates, those "lower" animals toward which we usually show no sympathy. They are, quite literally, a great unknown. In our own laboratory, for example, in the last few years, working as a relatively modest group of 5 to 7 researchers, we have isolated (1) potential heart drugs from fireflies, (2) a cockroach repellent from a millipede, (3) a nerve drug from another millipede, and (4) shark repellents from a marine mollusc. There is really no telling what, in the line of novel biological materials, the lower animals might have to offer.

My final point deals with what may well, on the long run, prove to be one of the most serious consequences of species extinction. It is a consequence that biologists are only now beginning to appreciate, and may need some years to appreciate in full. Let me elaborate in brief. In these days of genetic engineering, a species is to be viewed as more than just a unique conglomerate of genes. It is to be viewed also as a depository of genes that are potentially transferrable. The technology of gene transfer, nonexistent only a few years ago, is now beyond the stage of infancy. Genes can be transferred between microorganisms, they are beginning to be transferred between animals, and they will doubtless eventually be transferrable between plants. The implications of this technology are tremendous and the subject of intense current discussion. The extinction of a species, in the light of these advances, takes on new meaning. It does not simply mean the loss of one volume from the library of nature, but the loss of a loose-leaf book whose individual pages, were the species to survive, would remain available in perpetuity for selective transfer and improvement of other species. The notion that species extinction is the extinction of individual utilizeable genes is no longer fanciful.

Consider for example, how this might apply to agriculture, and specifically to the improvement of plant resistance to pests. Current research in chemical ecology has shown that many plants protect themselves against insects, worms, and microorganisms by use of chemicals that they themselves produce. Many of these compounds have been indentified and synthesized, and their effectiveness demonstrated in actual tests. Some, such as certain simple terpenes, are unusually effective. Can such compounds be sprayed on plants as substitutes to convential pesticides? Usually not, since they tend to evaporate or degrade too quickly. The reason they

Dr. Thomas Eisner

work for plants is that the plants produce them at ongoing rates, in the small amounts in which they need them. Production of these defensive chemicals is under genetic control. Suppose that one were able to transfer the controlling genes from a protected species of plant to one that isn't, thereby conveying upon the recipient the ability to produce its own defenses. Imagine being able to endow the cotton plant with the genetic capacity to produce its own repellent against the boll weevil. My prediction is that such transferrance of genetic capacity will be a real possibility in the future and that benefits will accrue from the technology on a multiplicity of fronts.

Wilderness preservation is justified in my view on esthetic grounds alone, but is clearly mandated on practical grounds as well. The species that we save today will remain to serve as part of the gene banks of tomorrow. The tide of extinction needs to be stemmed. Reauthorization of the Endangered Species Act is an essential small step in the right direction.

BEFORE THE
SUBCOMMITTEE ON ENVIRONMENTAL POLLUTION
COMMITTEE ON THE ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

HEARING ON THE REAUTHORIZATION OF THE ENDANGERED SPECIES ACT

TESTIMONY OF
PROFESSOR STEPHEN R. KELLERT
YALE UNIVERSITY
SCHOOL OF FORESTRY AND ENVIRONMENTAL STUDIES
DECEMBER 10, 1981

Mr. Chairman, my name is Stephen Kellert and I am an associate professor of social ecology at the Yale University School of Forestry and Environmental Studies. For the past decade, I have conducted various studies on the interaction of people and wildlife including such problems as endangered species, animal damage control, wildlife habitat preservation and the consumptive uses of wildlife resources. At present, I am completing a four year research project on American attitudes, knowledge and behaviors toward wildlife and natural habitats. This study was funded by a grant from the United States Fish and Wildlife Service and involved personal interviews in the Fall of 1978 with 3,107 Americans residing in the 48 contiguous states and Alaska. Careful random sampling procedures and extraordinary efforts to interview the designated respondents resulted in a good representative sample of the American public when compared with national census data. At this time, four lengthy reports on the study have been published by the National Technical Information Services entitled: "Public Attitudes Toward Critical Wildlife and Natural Habitat Issues"; "Activities of the American Public Relating to Animals"; "Knowledge, Affection and Basic Attitudes Toward Animals in American Society"; and, "Trends in Animal Use and Perception in 20th Century America".

I would like to share with you some of the results concerning public attitudes toward endangered species protection. I firmly and confidently believe these results indicate public support for the Endangered Species Act and the process established to determine both the listing and recovery of threatened and endangered wildlife. The entire chapter on endangered species from the first report is attached to my formally submitted written testimony.

In the opinion of most scientists, the Endangered Species Act is a sound response to the biological threat of extinction. That it took until 1966 for the first Endangered Species Act to be passed by Congress, and that the wisdom of reauthorizing the act is being debated today, testifies to the basically political nature of the issue. The Endangered Species Act, in other words, is a classic example of what some have called biopolitics and, thus, the issue cannot be strictly considered on the biological or ecological merits of the matter alone. Given this sociopolitical context, a fundamental consideration is public support for protecting endangered and threatened wildlife, particularly in situations where protection conflicts with diverse human needs, wants and material benefits. A chorus of voices has speculated on the public's unwillingness to protect most endangered or threatened wildlife when substantial socioeconomic sacrifice and hardship are involved. In a world of scarcity, unemployment and, in some cases, inadequate food, protection of endangered and threatened wildlife has been described by some as a luxury society can ill-afford and which the public will not tolerate. Fortunately, we possess information on this issue of public support, collected in a scientifically standardized, empirical and objective fashion, which I would like now to share with you.

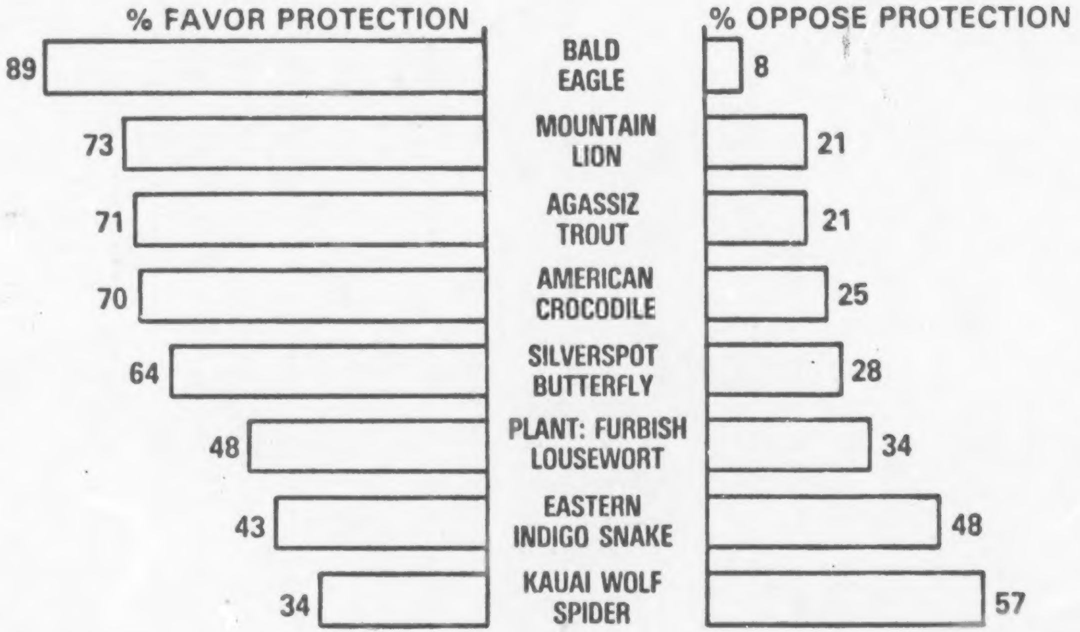
Our national study considered the protection of endangered and threatened wildlife in the context of various socioeconomic impacts including energy, water, forestry and industrial developments. Additionally, the public's knowledge and familiarity of the subject were examined, although these latter results will not be reviewed here but are included in the written testimony.

As indicated by the simplified bar graph in Figure One, when questioned about costly modification of an energy development project to protect varying endangered animals, the American public overwhelmingly favored such modification for the sake of endangered species of eagle, mountain lion, trout, crocodile and butterfly. In contrast, less than a majority favored this trade-off when the animals included an endangered plant, snake or spider species. On the other hand, as Figure Two indicates, a willingness to make this sacrifice for the endangered spider was found among the better educated and members of environmental protection organizations.

The respondents were also asked to consider situations involving conflicts between forestry, industrial development and protecting endangered wildlife. As Figure Three reveals, a moderate but statistically significant 56% of the American public favored the setting aside of 5 million acres of national forest land -- at the cost of jobs and building materials -- to protect the critical habitat of the endangered grizzly bear. Similarly, a statistically significant 55% of the public disapproved of building an industrial plant on a marsh owned by a manufacturer, that would employ 1,000 people in an area of high unemployment, if this

FIGURE 1

WILLINGNESS TO PROTECT ENDANGERED SPECIES DESPITE INCREASED COST OF ENERGY DEVELOPMENT PROJECT



ENDANGERED SPECIES

A recent law passed to protect endangered species may result in changing some energy development projects at greater cost. As a result, it has been suggested that endangered species protection be limited only to certain animals and plants. Which of the following endangered species would you favor protecting, even if it resulted in higher costs for an energy development project?

A SPIDER, SUCH AS THE KAUAI WOLF SPIDER:

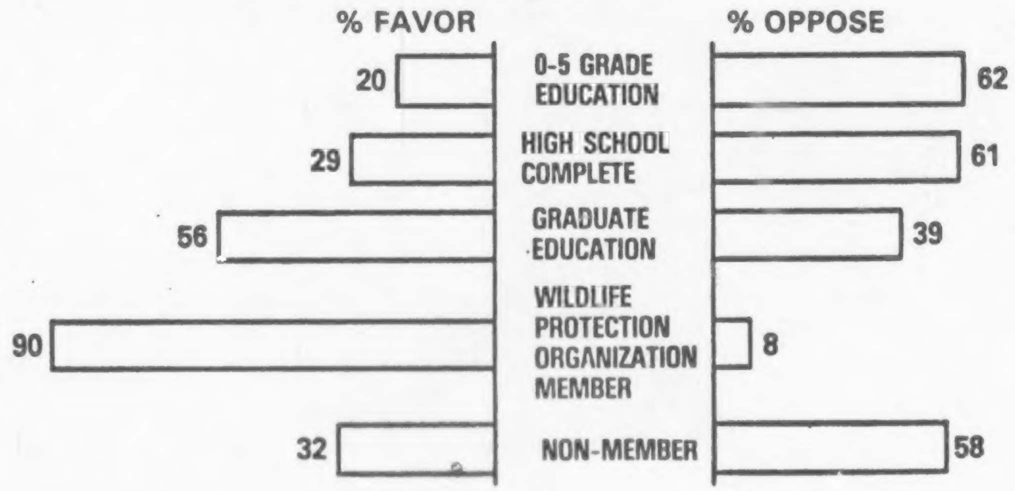
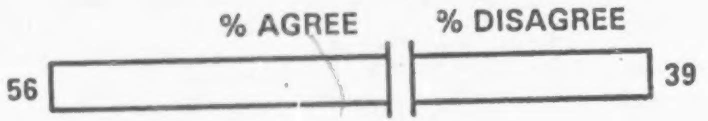


Figure 2

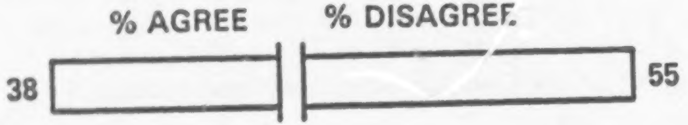
Figure 3

ENDANGERED SPECIES

It has been suggested that 5 million acres of national forest land be set aside so that the endangered grizzly bear remain undisturbed. The timber industry objects, saying that jobs and needed lumber will be lost. Would you agree to protect the endangered grizzly bear even if it resulted in the loss of some jobs and building material?



A large coastal city has an unemployment problem. A major manufacturer wants to build a new plant on a marsh it owns which could employ 1,000 people, but conservationists claim this will destroy land needed by a rare bird. Do you agree that this plant should be built, even if it endangers the bird species?



activity destroyed the habitat of a rare and threatened bird species.

The final table considers public acceptance of varying water uses if these projects resulted in endangerment of an unspecified fish species. The results indicate public approval of those water projects involving relatively critical human needs -- i.e., projects resulting in hydroelectric power, increasing human drinking supplies and enhancement of agricultural productivity. On the other hand, less than a majority approved of diverting water to cool industrial plant machinery or making a lake for recreational purposes if these projects threatened a fish species with extinction.

A number of conclusions are suggested by these various results including:

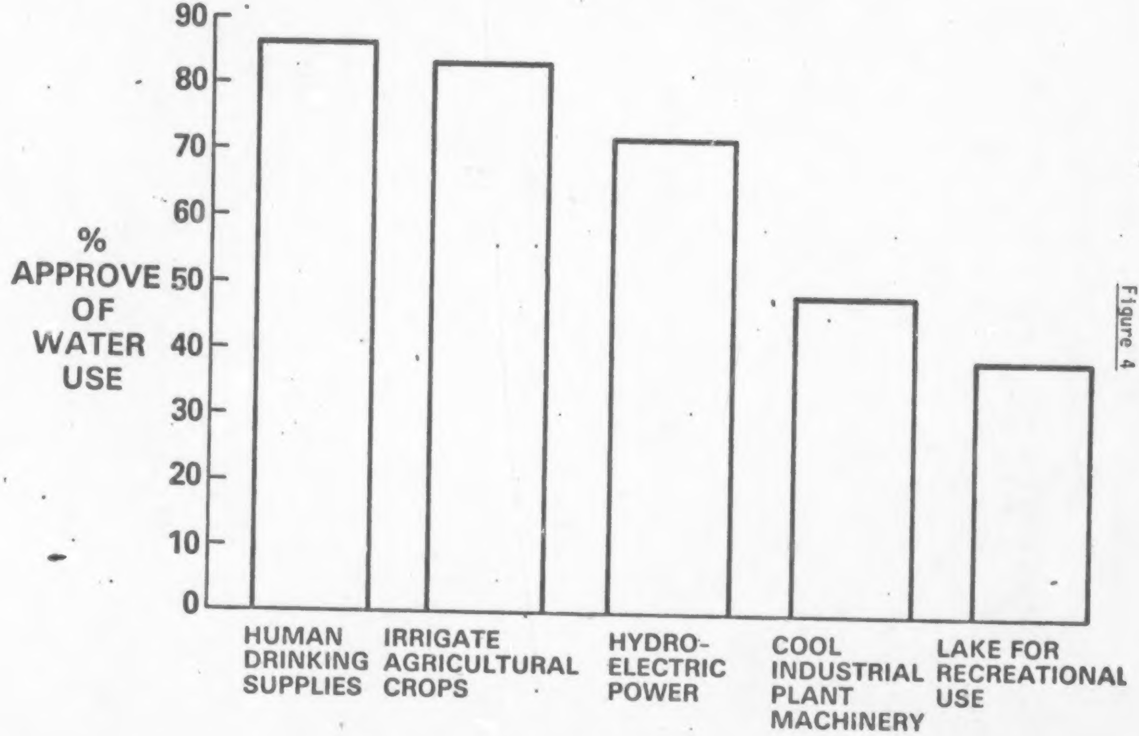
(1) an apparent willingness on the part of most Americans to accept some very substantial socioeconomic impacts to protect certain species of endangered wild life;

(2) species most likely to receive this protective consideration are, typically, higher vertebrates (mainly, mammals and birds), aesthetically attractive and/or historically and culturally familiar animals;

(3) endangered species least likely to receive public support are, typically, lower vertebrates (mainly, fish and reptiles), invertebrates and/or aesthetically unattractive animals, particularly in situations where relatively important human needs are affected (e.g., energy, food, and water).

While the public may appear to qualify its protective concern, the results, nonetheless, indicate a fairly pronounced willingness to tolerate major socioeconomic impacts to protect particular endangered and threatened species. An obvious question arising from these findings is their accurate reflection of American sentiment, particularly when people are not confronted with analogous 'real-life' situations. Additionally, how can we explain the apparent willingness of so many people to forego various utilitarian benefits for the sake of rare and endangered

Figure 4



ATTITUDE TOWARDS VARYING WATER USES OF ENDANGERED FISH SPECIES creatures they will probably never see, let alone directly benefit from in a material sense?

It has been remarked that the body politic in a democracy retains a collective wisdom which, over the long-run, works toward the benefit of the many over the interests of the few. Certainly, this wisdom is not without its irrational moments, but politicans and political philosophers have remarked on its logic and success when viewed comparatively in time and across other systems of government. Indeed, as the elected officials in this room are well-aware, we pick our leaders in this manner rather than subjecting such choices to a panel of experts. In the process, presidents and others are often elected by margins considerably less than the public support expressed for protecting many of the species reported here.

One additionally wonders what could explain such altruistic sentiment and willingness to render material sacrifices on behalf of particular endangered animals. No answer is definitively self-evident and, yet, such judgments are not unprecedented. Is it so remarkable that most Americans regard the extinction of certain irreplacable forms of life as ethically questionable? History is replete with examples of Americans foregoing substantial material benefits because their acquisition was perceived as inconsistent with more basic assumptions of right and morality. One can cite slavery as an illustration of a practice once and still possessing strong utilitarian value but now perceived as ethically repugnant and inconceivable. Regardless of the explanation offered, the empirical results of this research suggest the American people support the protection of certain endangered wildlife and, by implication, the process involved in assessing and mitigating the socioeconomic impacts that may be necessary.

EXCERPTED FROM

"PUBLIC ATTITUDES TOWARD CRITICAL WILDLIFE AND NATURAL HABITAT ISSUES"

Dr. Stephen R. Kellert

School of Forestry and Environmental Studies

Yale University

Phase One results of a U.S. Fish and Wildlife Service funded study of "American Attitudes, Knowledge and Behaviors Toward Wildlife and Natural Habitats". Presented to the U.S. Fish and Wildlife Service, October 15, 1979.

Published by
National Technical Information Service
U.S. Department of Commerce
5285 Port Royal Road
Springfield, VA 22161
Accession Number: PB-80-138332

III. CRITICAL ISSUES

The findings presented in this paper on critical issues are divided into seven categories: endangered species, animal damage control, habitat protection, consumptive use, wildlife management, backcountry and park use, and miscellaneous issues. The specific breakdown of these broad areas is indicated in Table 9 and cover approximately 34 different wildlife management issues. The adequacy of the data varies considerably, and, in certain cases, limited findings may permit only a preliminary understanding of public perceptions of a critical issue.

A. ENDANGERED SPECIES

Protection of endangered species was generally explored in the context of various socioeconomic impacts resulting from this effort, including effects on energy development, water use, forest utilization and industrial development.

Additionally, the public's knowledge and awareness of endangerment and extinction were examined.

The results reported in Tables 10A and 10B (more graphically illustrated by Figure 2) concern the situation of costly modification of an energy development project in order to protect varying endangered species.* The critical variables are the type of socioeconomic impact--expensive modification of an energy development project--and the relative value of different endangered species (one mammal, one bird, two reptiles, one fish, two invertebrates and one plant species).

As the results indicate, the general public overwhelmingly favored protecting the bald eagle (species H on Table 10B) and the mountain lion (species B), despite a finding on a species preference question that predators, in general, were less preferred than most animal groups. The large size, attractiveness and historically significant role of bald eagles and mountain lions may have been factors in these animals' favor. A majority of livestock producers, the only group to express this viewpoint, were opposed to protecting the mountain lion.

The general public strongly supported protection of endangered species of trout (C), crocodile (E) and butterfly (A). The trout results were

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*A number of format procedures have been used in many of the tables and should be noted in order to facilitate an understanding of these results:

(1) the numbers in parentheses in the first row of each finding indicate the actual number of people who responded in a particular way;

(2) the numbers in the second row to the single decimal point refer to the percentage of respondents who answered in a particular way;

(3) the larger numbers in the third row summarize the percentage of people who positively or negatively answered a particular question;

(4) the no opinion response category is included only when a specific answer alternative on a particular question exceeds 8.5 percent.

TABLE 10A

MODIFY ENERGY PROJECT TO PROTECT SELECTED ENDANGERED SPECIES X GENERAL PUBLIC*

A RECENT LAW PASSED TO PROTECT ENDANGERED SPECIES MAY RESULT IN CHANGING SOME ENERGY DEVELOPMENT PROJECTS AT GREATER COST. AS A RESULT, IT HAS BEEN SUGGESTED THAT ENDANGERED SPECIES PROTECTION BE LIMITED ONLY TO CERTAIN ANIMALS AND PLANTS. WHICH OF THE FOLLOWING ENDANGERED SPECIES WOULD YOU FAVOR PROTECTING, EVEN IF IT RESULTED IN HIGHER COSTS FOR AN ENERGY DEVELOPMENT PROJECT?

		STRONGLY		SLIGHTLY	SLIGHTLY		STRONGLY	NO
			FAVOR			OPPOSE		OPINION
A.	A BUTTERFLY, SUCH AS THE SILVERSPOT BUTTERFLY	(232) 9.5	(717) 29.2	(612) 25.0	(228) 9.3	(371) 15.1	(91) 3.7	(201) 8.2
			64			**28**		
B.	THE EASTERN MOUNTAIN LION	(409) 16.7	(880) 35.9	(504) 20.6	(161) 6.6	(292) 11.9	(69) 2.8	(138) 5.6
			73			**21**		
C.	A FISH, SUCH AS THE AGASSIZ TROUT	(293) 11.9	(901) 36.7	(550) 22.4	(178) 7.2	(263) 10.7	(64) 2.6	(201) 8.2
			71			**21**		
D.	A SPIDER, SUCH AS THE KAUAI WOLF SPIDER	(115) 4.7	(292) 11.9	(428) 17.4	(338) 13.8	(710) 28.9	(343) 14.0	(226) 9.2
			34			**57**		
E.	THE AMERICAN CROCODILE	(325) 13.2	(859) 35.0	(527) 21.5	(179) 7.3	(331) 13.5	(104) 4.2	(127) 5.2
			70			**25**		

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*SEE NOTE ON BOTTOM OF PAGE 18 FOR DEFINITION OF THE FIGURES IN PARENTHESES, THE FIGURES WITH DECIMAL POINTS, AND BY THE TWO LARGE BOLD FACED NUMBERS NEAR THE CENTER OF EACH SPECIES RESULT.

TABLE 10B

MODIFY ENERGY PROJECT
TO PROTECT SELECTED ENDANGERED SPECIES X GENERAL PUBLIC

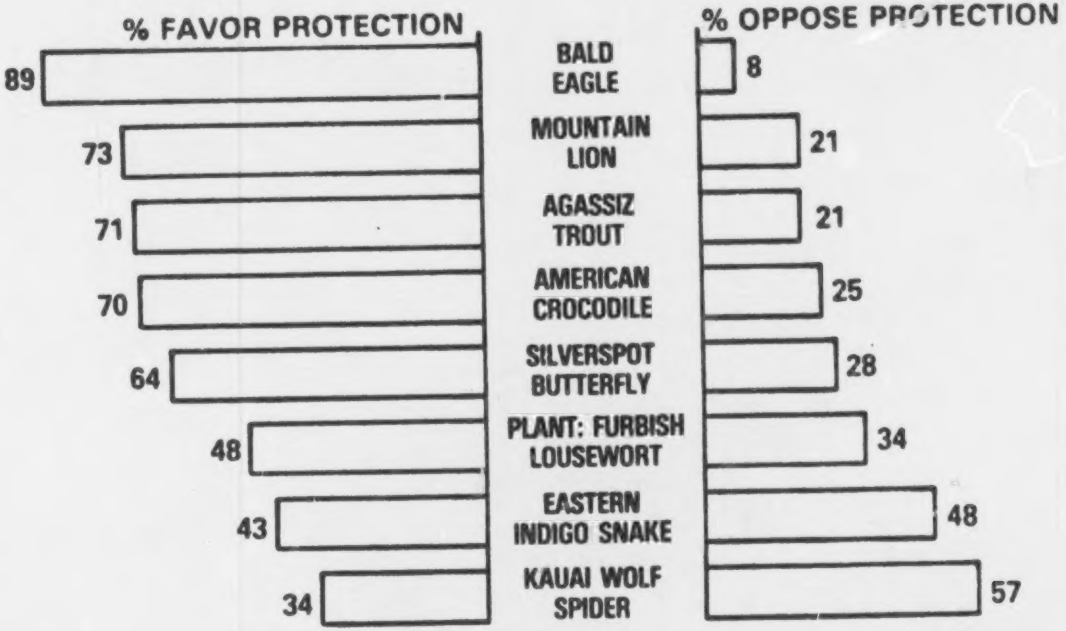
		STRONGLY		SLIGHTLY	SLIGHTLY		STRONGLY	NO
			FAVOR			OPPOSE		OPINION
F.	A PLANT, SUCH AS THE FURBISH LOUSEWORT*	(140) 5.7	(510) 20.8	.(519) 21.1	(266) 10.8	(438) 17.8	(127) 5.2	(451) 18.4
			48			34		
G.	A SNAKE, SUCH AS THE EASTERN INDIGO SNAKE**	(147) 6.0	(471) 19.2	(447) 18.2	(264) 10.7	(622) 25.3	(304) 12.4	(197) 8.0
			43			49		
H.	A BIRD, SUCH AS THE BALD EAGLE	(1078) 43.9	(907) 37.0	(199) 8.1	(63) 2.6	(106) 4.3	(29) 1.2	(70) 2.8
			89			8		

* FAVOR VERSUS OPPOSE DIFFERENCES WERE SIGNIFICANT: Z = 7.56, P = $\leq$ .0001

** FAVOR VERSUS OPPOSE DIFFERENCES WERE SIGNIFICANT; Z = 2.63, P = .0009

FIGURE 2

WILLINGNESS TO PROTECT ENDANGERED SPECIES DESPITE INCREASED COST OF ENERGY DEVELOPMENT PROJECT



particularly interesting as findings soon to be discussed indicate relatively little support for preserving a fish, when the species is unknown, if substantial socioeconomic impact is involved. The character of the trout as a popular game species may have been related to a strongly favorable view of this animal, a popularity also demonstrated by the results of the 33 species preference question in which the trout was the sixth most preferred animal. Additionally, the butterfly was among the few well-liked invertebrates, as indicated by this species preference question, and aesthetic factors may have been important in the public's willingness to protect this animal. The strong protectionist attitude toward the crocodile was somewhat surprising, although probably influenced by the considerable publicity this animal has received in recent years.

Less than a majority favored protecting endangered species of plant (the furbish lousewort--species F), snake (the eastern indigo--G) and spider (the Kauai wolf spider--D), if expensive change of an energy development project resulted. The public's attitude toward protecting the plant was particularly ambivalent, however, with only 34 percent opposed to protection and over 18 percent indicating no opinion. In contrast, a majority of the public opposed protecting a snake or spider species, and these results may have been related to presumptions about the aesthetic, human injury, and phylogenetic relatedness (to human beings) characteristics of these animals.

Support for protecting these endangered species varied considerably among different social and animal activity groups. Table 11, for example, indicates a strong relationship to education, with a majority of those having a high school education or less opposed to protecting the eastern indigo snake, while, in contrast, nearly 70 percent of those with some graduate education were in favor of protecting this animal. Additionally, significant

TABLE 11

MODIFY ENERGY PROJECT TO PROTECT EASTERN INDIGO SNAKE X SELECTED EDUCATION GROUPS

A RECENT LAW PASSED TO PROTECT ENDANGERED SPECIES MAY RESULT IN CHANGING SOME ENERGY DEVELOPMENT PROJECTS AT GREATER COST. AS A RESULT, IT HAS BEEN SUGGESTED THAT ENDANGERED SPECIES PROTECTION BE LIMITED ONLY TO CERTAIN ANIMALS AND PLANTS. WHICH OF THE FOLLOWING ENDANGERED SPECIES WOULD YOU FAVOR PROTECTING, EVEN IF IT RESULTED IN HIGHER COSTS FOR AN ENERGY DEVELOPMENT PROJECT?

A SNAKE, SUCH AS THE EASTERN INDIGO SNAKE:

	STRONGLY	FAVOR	SLIGHTLY	SLIGHTLY	OPPOSE	STRONGLY	NO OPINION
0-5 GRADE EDUCATION	(0)	(6)	(3)	(4)	(17)	(4)	(7)
	0.0	14.7	8.3	9.6	40.7	9.6	17.1
		23			60		
HIGH SCHOOL COMPLETE	(29)	(107)	(143)	(89)	(194)	(108)	(64)
	3.9	14.6	19.4	12.1	26.4	14.8	8.3
		38			53		
SOME GRADUATE EDUCATION	(13)	(22)	(21)	(9)	(7)	(8)	(4)
	16.0	26.4	25.4	10.6	8.1	9.1	4.4
		68			28		

$X^2 = 271.77 \quad P = \leq .0001$

differences among educational groups were indicated for protecting the Kauai wolf spider, as revealed by the results of Table 12 and Figure 3. Finally, large differences between members of environmental protection organizations and respondents belonging to no conservation organization are indicated by the bottom figure of Table 12. The latter results suggest substantial variation between the general public and environmental protection advocates regarding the value of protecting certain endangered wildlife.

The results of Table 13 (more graphically depicted by the bar graph in Figure 4) deal with a Tellico-Dam type question, as it confronted the respondent with protecting a threatened, unknown fish species at the cost of forfeiting various water use benefits. The findings strongly demonstrate the importance of the species in question, and the degree of socioeconomic impact. Perhaps the most significant variation related to what might be called "essential" versus "nonessential" benefits. In circumstances involving relatively critical human needs--hydroelectric energy (Reason B), increasing drinking supplies (C) and irrigating agricultural crops (E)--the public strongly opposed curtailing the water use projects in order to protect an unknown fish species. In contrast, in those situations entailing relatively nonessential benefits, less than a majority approved of the projects--i.e., diverting water for cooling industrial plant machinery (A), and nearly 60 percent opposed constructing a dam to make a lake for recreational purposes (D). The importance of the distinction between essential and nonessential benefits--at least in regard to an unfamilar and phylogenetically "lower" species--was further suggested by the fact that no demographic or animal activity group (including environmental protection and humane organization members) disapproved of water uses involving an increase in human drinking supplies or irrigating agricultural crops. Interestingly, the Tellico Dam

TABLE 12

MODIFY ENERGY PROJECT TO PROTECT KAUAI WOLF SPIDER X SELECTED EDUCATION, ENVIRONMENTAL ORGANIZATION MEMBERSHIP AND NON-MEMBERSHIP GROUPS

A RECENT LAW PASSED TO PROTECT ENDANGERED SPECIES MAY RESULT IN CHANGING SOME ENERGY DEVELOPMENT PROJECTS AT GREATER COST. AS A RESULT, IT HAS BEEN SUGGESTED THAT ENDANGERED SPECIES PROTECTION BE LIMITED ONLY TO CERTAIN ANIMALS AND PLANTS. WHICH OF THE FOLLOWING ENDANGERED SPECIES WOULD YOU FAVOR PROTECTING, EVEN IF IT RESULTED IN HIGHER COSTS FOR AN ENERGY DEVELOPMENT PROJECT?

A SPIDER, SUCH AS THE KAUAI WOLF SPIDER:

	STRONGLY		SLIGHTLY	SLIGHTLY		STRONGLY	NO
		FAVOR			OPPOSE		OPINION
0-5 GRADE EDUCATION	(2) 4.8	(3) 8.0 20	(3) 7.6	(4) 9.6	(14) 33.4 62	(8) 19.1	(7) 17.5
HIGH SCHOOL COMPLETE	(28) 3.8	(61) 8.3 29	(123) 16.8	(120) 16.4	(225) 30.7 61	(102) 13.9	(75) 10.2
GRADUATE EDUCATION	(12) 6.9	(37) 21.3 56	(51) 29.3	(24) 13.8	(27) 15.5 39	(16) 9.2	(7) 4.0

$X^2 = 202.72$, $P = \leq .0001$

	STRONGLY		SLIGHTLY	SLIGHTLY		STRONGLY	NO
		FAVOR			OPPOSE		OPINION
ENVIRONMENTAL PROTECTION ORGANIZATION MEMBER*	(11) 28.2	(21) 53.8 90	(3) 7.7	(2) 5.1	(1) 2.6 8	(0) 0.0	
NON-MEMBER	(112) 4.1	(314) 11.5 32	(458) 16.7	(393) 14.3	(816) 29.8 58	(388) 14.2	

$X^2 = 82.35$, $P = \leq .0001$

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* THESE INCLUDE ALL RESPONDENTS WHO BELONGED TO ANY OF THE FOLLOWING ORGANIZATIONS: ENVIRONMENTAL DEFENSE FUND, NATURAL RESOURCES DEFENSE COUNCIL, NATURE CONSERVANCY, SIERRA CLUB, WILDERNESS SOCIETY, CONSERVATION FOUNDATION, FRIENDS OF THE EARTH.

FIGURE 3

MODIFY ENERGY PROJECT TO PROTECT KAUAI WOLF SPIDER X
SELECTED EDUCATION, ENVIRONMENTAL ORGANIZATION MEMBERSHIP AND NON-MEMBERSHIP GROUPS

A recent law passed to protect endangered species may result in changing some energy development projects at greater cost. As a result, it has been suggested that endangered species protection be limited only to certain animals and plants. Which of the following endangered species would you favor protecting, even if it resulted in higher costs for an energy development project?

A SPIDER, SUCH AS THE KAUAI WOLF SPIDER:

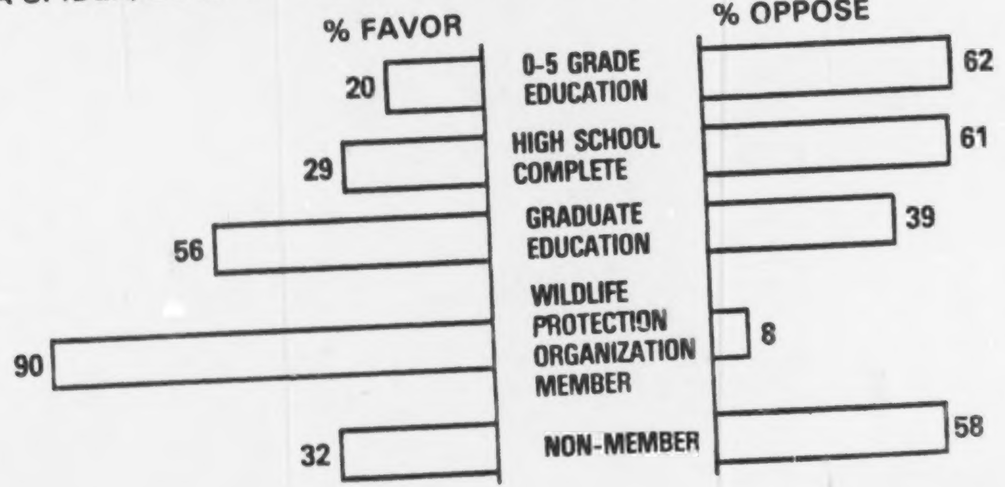


TABLE 13

DIVERSE WATER USES IF ENDANGER SPECIES OF FISH X GENERAL PUBLIC

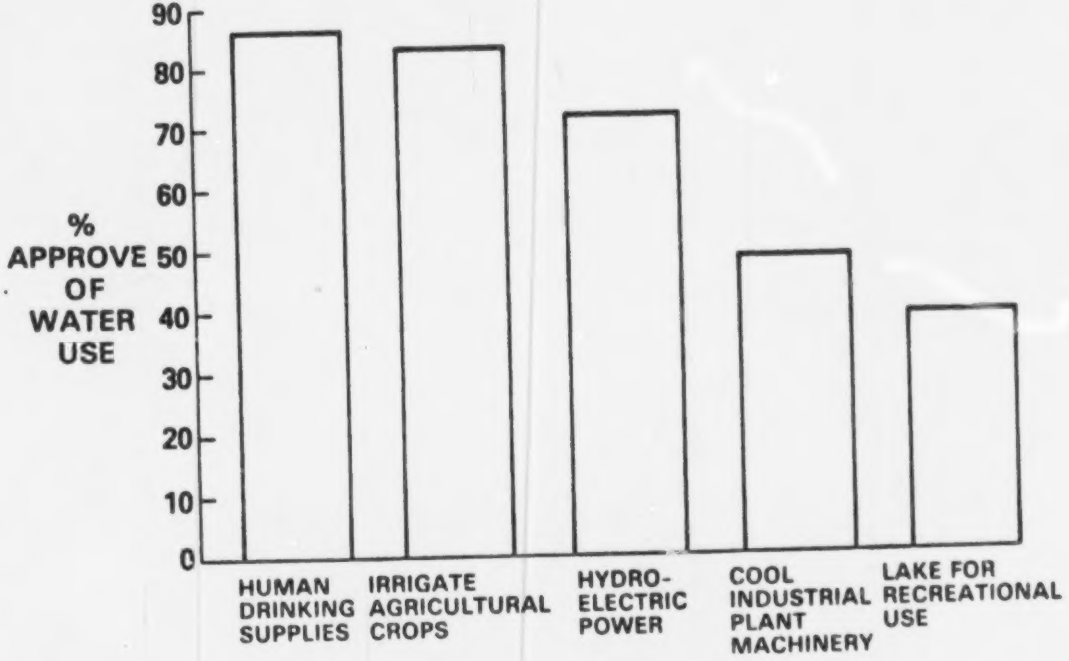
VARIOUS KINDS OF FISH HAVE BEEN THREATENED WITH EXTINCTION BECAUSE OF DAMS, CANALS AND OTHER WATER PROJECTS. PLEASE INDICATE IF YOU WOULD APPROVE OF THE FOLLOWING WATER USES IF THEY WERE TO ENDANGER A SPECIES OF FISH.

		STRONGLY APPROVE	APPROVE	SLIGHTLY APPROVE	SLIGHTLY DISAPPROVE	DISAPPROVE	STRONGLY DISAPPROVE
A.	WATER DIVERTED TO COOL INDUSTRIAL PLANT MACHINERY.*	(75)	(532)	(569)	(422)	(543)	(175)
		3.1	21.7	23.2	17.2	22.1	7.1
			48			46	
B.	WATER DAMMED TO PROVIDE HYDROELECTRIC ENERGY POWER	(190)	(937)	(631)	(250)	(248)	(80)
		7.7	38.2	25.7	10.2	10.1	3.3
			72			24	
C.	WATER DIVERTED TO INCREASE HUMAN DRINKING SUPPLIES	(456)	(1267)	(405)	(121)	(103)	(39)
		18.6	51.6	16.5	4.9	4.2	1.6
			87			11	
D.	WATER DAMMED TO MAKE A LAKE FOR RECREATIONAL USE	(88)	(432)	(444)	(381)	(702)	(327)
		3.6	17.6	18.1	15.5	28.6	13.3
			39			57	
E.	WATER DIVERTED TO IRRIGATE AGRICULTURAL CROPS	(311)	(1157)	(576)	(166)	(127)	(47)
		12.7	47.1	23.4	6.8	5.2	1.9
			83			14	

*NOTE DIFFERENCE BETWEEN APPROVE AND DISAPPROVE ON THIS WATER USE IS NOT SIGNIFICANT WITH $Z = .75$, $P = .45$. ALL OTHER WATER USE DIFFERENCES BETWEEN APPROVE AND DISAPPROVE ARE HIGHLY SIGNIFICANT, $P = \leq .0001$.

Figure 4

DIVERSE WATER USES IF ENDANGER SPECIES OF FISH X GENERAL PUBLIC



project was initially justified largely in terms of its recreational value, whereas the recent Congressional passage of funds to complete the project was largely related to the potential hydroelectric energy benefits. Substantial differences between environmental protection organization members and non-members on the hydroelectric energy option are indicated by Table 14.

The results of Table 15 and the bar graph of Figure 5 concern two additional endangered species questions involving different species and socioeconomic impacts. The first question regards the preservation of very large amounts of wilderness habitat in order to protect the grizzly bear, even if this means the loss of forest products and jobs. The results indicate a moderate, but significant public willingness to accept this trade-off, although support fluctuated widely among diverse social groups. The second question in Table 15 concerns the filling of wetlands to build an industrial plant in an area of high unemployment. The endangered animal is an unspecified bird species, and, like the grizzly bear results, the public indicated a significant but moderate support for protection despite the socioeconomic impact.

A wide variety of social impacts and endangered species have been covered. Although the situations posed by the questions varied considerably and comparisons are not entirely warranted, a crude indication of the public's willingness to protect these different endangered animals is indicated by the bar graph in Figure 6. To recapitulate, a majority of the public favored protecting species of eagle, mountain lion, trout, crocodile, butterfly, grizzly bear, and unspecified species of bird and fish (in the context of water diverted for recreational purposes). On the other hand, less than a majority approved of protecting a species of plant, snake, spider, and an unspecified fish species (in water use situations involving

TABLE 14

HYDROELECTRIC POWER EVEN IF ENDANGER SPECIES OF FISH X ORGANIZATION MEMBERSHIP

VARIOUS KINDS OF FISH HAVE BEEN THREATENED WITH EXTINCTION BECAUSE OF DAMS, CANALS, AND OTHER WATER PROJECTS. WOULD YOU APPROVE OF THE FOLLOWING WATER USE IF IT WERE TO ENDANGER A SPECIES OF FISH?

WATER DAMMED TO PROVIDE HYDROELECTRIC ENERGY POWER.

ENVIRONMENTAL PRESERVATION ORGANIZATION MEMBER.

STRONGLY APPROVE	APPROVE	SLIGHTLY APPROVE	SLIGHTLY DISAPPROVE	DISAPPROVE	STRONGLY DISAPPROVE
(1)	(4)	(7)	(10)	(10)	(7)
2.6	10.3	17.9	25.6	25.6	17.9
	31			69	

NON-MEMBER:

STRONGLY APPROVE	APPROVE	SLIGHTLY APPROVE	SLIGHTLY DISAPPROVE	DISAPPROVE	STRONGLY DISAPPROVE
(197)	(1087)	(701)	(266)	(273)	(78)
7.2	39.7	25.6	9.7	10.0	2.8
	73			23	

$X^2 = 33.52$, $P = \leq .0001$

TABLE 15

SET ASIDE FOREST LAND FOR GRIZZLY BEAR EVEN IF LOSS OF JOBS AND BUILDING MATERIAL X GENERAL PUBLIC

IT HAS BEEN SUGGESTED THAT 5 MILLION ACRES OF NATIONAL FOREST LAND BE SET ASIDE SO THAT THE ENDANGERED GRIZZLY BEAR REMAIN UNDISTURBED. THE TIMBER INDUSTRY OBJECTS, SAYING THAT JOBS AND NEEDED LUMBER WILL BE LOST. WOULD YOU AGREE TO PROTECT THE ENDANGERED GRIZZLY BEAR EVEN IF IT RESULTED IN THE LOSS OF SOME JOBS AND BUILDING MATERIAL?

STRONGLY AGREE	AGREE	SLIGHTLY AGREE	SLIGHTLY DISAGREE	DISAGREE	STRONGLY DISAGREE
(224)	(638)	(521)	(325)	(465)	(153)
9.1	26.0	21.2	13.2	19.0	6.3
	56			39	

$Z = 9.1$, $P = \leq .0001$

FILL WETLAND FOR NEW INDUSTRIAL PLANT EVEN IF ENDANGERS BIRD SPECIES X GENERAL PUBLIC

A LARGE COASTAL CITY HAS AN UNEMPLOYMENT PROBLEM. A MAJOR MANUFACTURER WANTS TO BUILD A NEW PLANT ON A MARSH IT OWNS WHICH COULD EMPLOY 1,000 PEOPLE, BUT CONSERVATIONISTS CLAIM THIS WILL DESTROY LAND NEEDED BY A RARE BIRD. DO YOU AGREE THAT THIS PLANT SHOULD BE BUILT, EVEN IF IT ENDANGERS THE BIRD SPECIES?

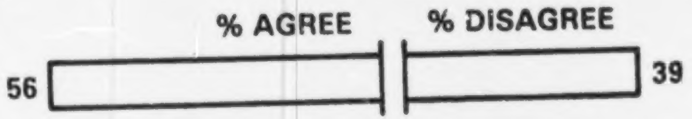
STRONGLY AGREE	AGREE	SLIGHTLY AGREE	SLIGHTLY DISAGREE	DISAGREE	STRONGLY DISAGREE
(120)	(442)	(375)	(347)	(620)	(379)
4.9	18.0	15.3	14.1	25.3	15.4
	38			55	

$Z = 8.6$, $P = \leq .0001$

FIGURE 5

PROTECT FOREST LAND AND WETLANDS FOR ENDANGERED SPECIES X GENERAL PUBLIC

It has been suggested that 5 million acres of national forest land be set aside so that the endangered grizzly bear remain undisturbed. The timber industry objects, saying that jobs and needed lumber will be lost. Would you agree to protect the endangered grizzly bear even if it resulted in the loss of some jobs and building material?



A large coastal city has an unemployment problem. A major manufacturer wants to build a new plant on a marsh it owns which could employ 1,000 people, but conservationists claim this will destroy land needed by a rare bird. Do you agree that this plant should be built, even if it endangers the bird species?

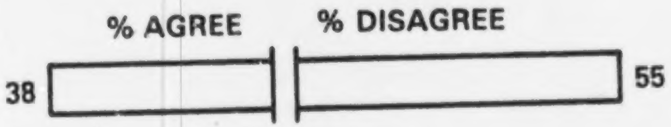
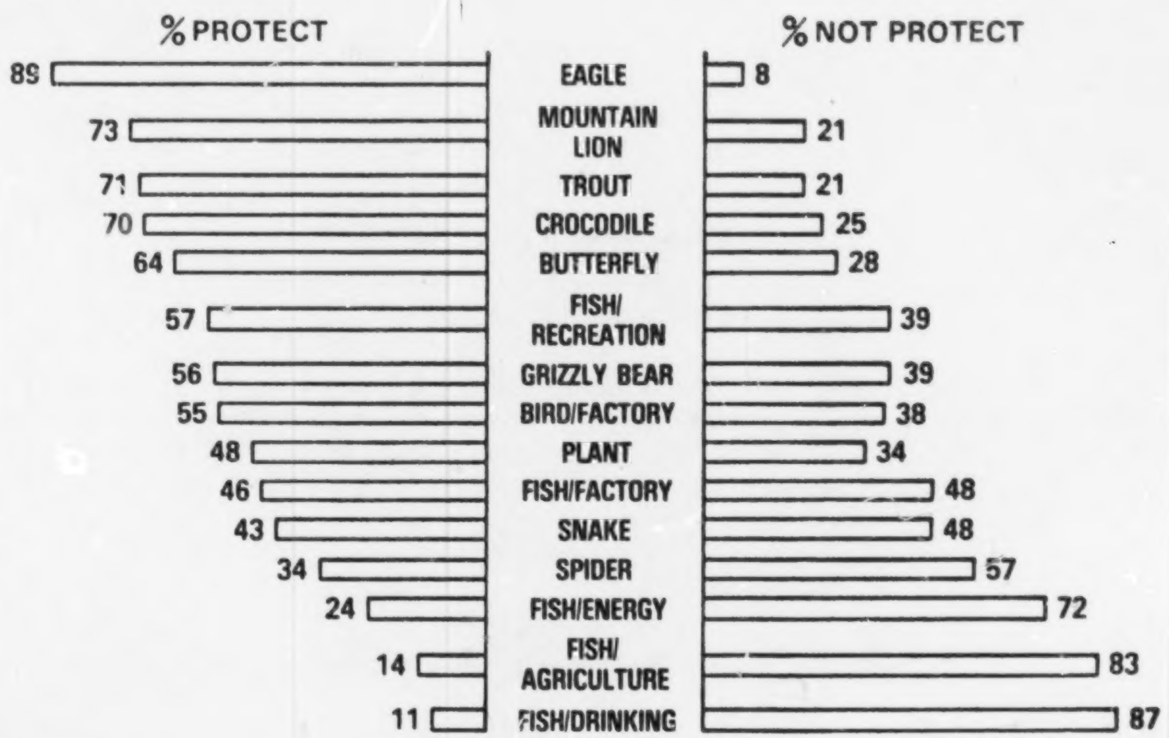


FIGURE 6

ENDANGERED SPECIES PROTECTION



human drinking supplies, agriculture, energy development and industrial plant cooling).

On the basis of these results and a review of existing literature, eight factors have been identified as significantly affecting public support for protecting endangered and threatened wildlife as indicated in Table 16. The first factor is aesthetics and probably was involved in the butterfly, snake, and spider results. Phylogenetic relatedness refers to the notion that, generally speaking, the closer the biological relation of the endangered animal to human beings, the greater the likelihood of public support for protecting the species. The third factor, reason for endangerment, can be roughly divided into direct and indirect causes. Direct causes typically involve situations of excessive human exploitation, and often inspire a greater sense of sympathy and guilt for the plight of the affected animals (e.g., the wolf and buffalo). Indirect causes, on the other hand, refer to "alterations in an animal's natural environment . . . through man's influence,"[2] and typically generate much less guilt or sympathy for the affected animal. A fourth factor is the tangible economic value of the species being exploited. A fifth factor concerns the number and types of people affected by efforts to protect the endangered species. A sixth factor is knowledge and familiarity with the endangered species, as public support for protecting the American crocodile and Agassiz trout suggested. The cultural and historical relationship to the animal represents a seventh factor, as may have been involved in the public's overwhelming support for protecting the bald eagle. Finally, an eighth factor is the perceived humaneness of the activity which is threatening the species. Relatively little opposition to water uses endangering a fish may have been influenced by assumptions regarding the ability of fish to think or feel pain.

TABLE 16

MAJOR VARIABLES EFFECTING PUBLIC ATTITUDES TOWARD ENDANGERED SPECIES MANAGEMENT

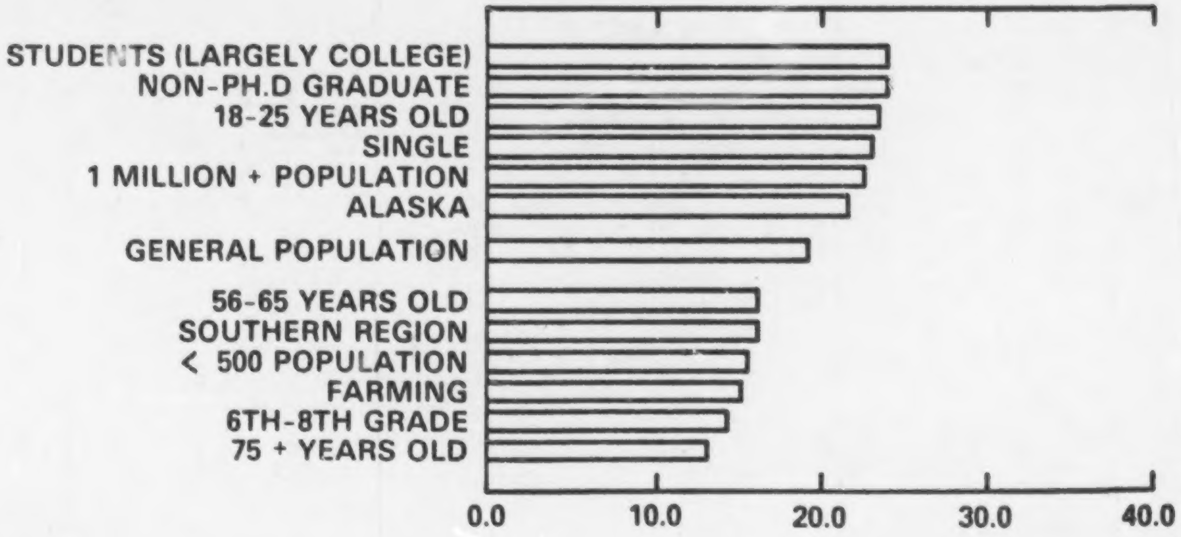
1. AESTHETICS
2. PHYLOGENETIC RELATEDNESS (SIMILARITY TO HUMANS)
3. REASON FOR ENDANGERMENT
   A. DIRECT — E.G, OVERHARVEST
   B. INDIRECT — E.G., HABITAT LOSS
4. ECONOMIC VALUE OF SPECIES
5. NUMBER AND TYPE OF PEOPLE AFFECTED BY LIMITS
6. KNOWLEDGE OF AND FAMILIARITY WITH SPECIES
7. A. CULTURAL RELATIONSHIP
   B. HISTORICAL RELATIONSHIP
8. HUMANENESS OF HARVESTING PROCEDURE

As previous results have indicated, the willingness to protect endangered species varies considerably among social demographic and animal activity groups. These variations are summarily reflected in the results of an endangered species protection scale developed on the basis of the four previously described endangered species questions. A higher score on this scale is indicative of a greater willingness to protect endangered wildlife. Demographic results are indicated in Figure 7 with significantly higher scores found among the highly educated, younger respondents, persons residing in areas of more than one million population, respondents with higher incomes, professionals, and residents of the Pacific Coast and Alaska states. In contrast, older respondents, persons with less than an eighth grade education, farmers, those residing in highly rural areas, and residents of the South had significantly lower scores.

The possibility of some factors being so interrelated that variable differences were a function of such interrelationships prompted the use of a statistical procedure, analysis of variance. Basically, this test examines the combined effect of a number of variables (in this case, the major demographic factors) on the dependent variable (the endangered species protection scale). This analysis revealed that some variables were not significantly related after other demographic factors were taken into account. For example, when the following factors were examined by analysis of variance--sex, race, marital status, occupation, region, age, population of present residence, education and income--race, occupation and income were found to be not significantly related to the endangered species protection scale. In other words, large differences between whites and non-whites, between farmers and professionals and among income groups were explained by their relationship to other variables (e.g., education, urban/rural residence).

FIGURE 7

ENDANGERED SPECIES SCALE MEANS BY SELECTED DEMOGRAPHIC GROUPS 1978 NATIONAL SAMPLE



Multiple classification analysis is a statistical technique based on analysis of variance which allows one to determine how much particular categories of a variable are different from the overall population mean adjusted for the effects of other variables. In other words, this technique allows us to determine which categories of a variable contribute the most to the overall significance of the variable--e.g., which specific regional or educational groups are most related to the endangered species score after other variables have been taken into account. The results of this analysis are indicated by Table 17 and reveal that the groups least inclined to support endangered species protection included respondents 56 years of age and older, from the south, and with less than an eighth grade education. In contrast, the groups most in favor of protecting endangered wildlife were those under 35 year of age, persons with graduate school education, respondents residing in areas of one million or more population, and residents of the Alaska and Pacific coast regions.

The results of Figure 8 indicate that all animal activity groups had higher endangered species protection scores than the general population. However, scientific study hobbyists and members of environmental protection, wildlife protection and humane-related organizations had significantly higher scores than did trappers, meat and recreation hunters, and, somewhat surprisingly, anti-hunters.

The final two endangered species tables concern the public's knowledge and awareness of the issue. The results of Table 18 suggest that the general public possesses an extremely limited knowledge of endangered wildlife. No more than one-third of the entire national sample obtained the correct answer to any one of these questions. For example, only 26 percent of the public knew that the manatee is not an insect. Perhaps even more surprisingly, only

TABLE 17

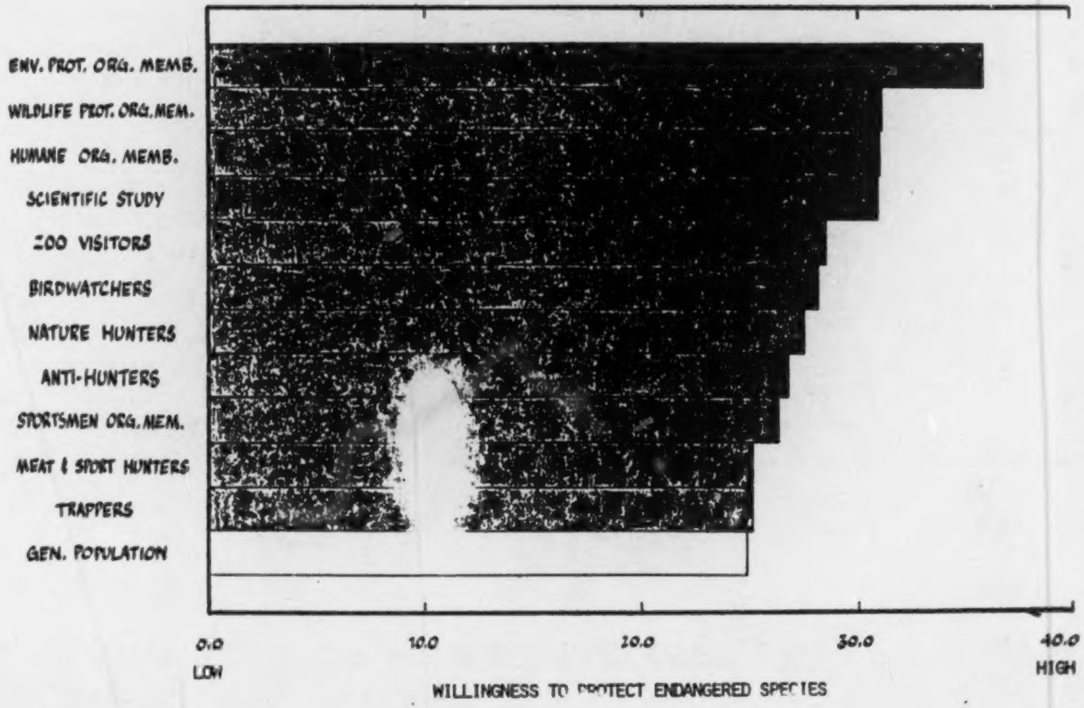
ANALYSIS OF VARIANCE AND MULTIPLE CLASSIFICATION ANALYSIS: ENDANGERED SPECIES PROTECTION SCALE X SELECTED DEMOGRAPHIC GROUPS

	F	SIG. OF F	MULTIPLE CLASSIFICATION ANALYSIS: DEVIATION FROM GRAND MEAN ADJUSTED FOR OTHER VARIABLES*
AGE	29.73	0.000	
18-25			3.01
26-35			1.92
36-55			-1.03
56-75			-2.16
76+			-3.31
EDUCATION	6.80	0.000	
0-5 GRADE			-0.71
6-8 GRADE			-0.92
9-11 GRADE			-0.81
HIGH SCHOOL			-0.64
COLLEGE			0.78
GRADUATE SCHOOL			2.25
REGION	8.81	0.000	
NORTHEAST			0.52
NORTH CENTRAL			0.77
SOUTH			-1.73
ROCKY MOUNTAINS			-0.14
PACIFIC			0.93
ALASKA			0.96
POPULATION OF PRESENT RESIDENCE	2.31	0.032	
LESS THAN 500			-0.05
500-1,999			-0.12
2,000-9,999			0.04
10,000-49,999			0.32
50,000-249,999			-0.71
250,000-999,999			-0.55
1 MILLION+			1.07

*HIGHER SCORE INDICATES GREATER WILLINGNESS TO PROTECT ENDANGERED SPECIES.

FIGURE 8

ENDANGERED SPECIES SCALE MEANS BY SELECTED ANIMAL ACTIVITY GROUPS 1978 NATIONAL SAMPLE



ILLUSTRATIVE SIGNIFICANCE TEST: NE V. TRAPPERS: F , P = .001

TABLE 18

KNOWLEDGE OF ENDANGERED SPECIES

	% CORRECT ANSWER	% WRONG ANSWER	% DON'T KNOW
THE PASSENGER PIGEON AND THE CAROLINA PARAKEET ARE NOW EXTINCT.	26.2	23.1	50.6
PESTICIDES WERE A MAJOR FACTOR IN THE DECLINE OF BROWN PELICANS.	33.3	9.9	56.8
THE MANATEE IS AN INSECT.	25.6	23.1	51.3
TIMBER WOLVES, BALD EAGLES, AND COYOTES ARE ALL ENDANGERED SPECIES OF ANIMALS.	25.6	61.7	13.8

26 percent (and just 37 percent in the Rocky Mountain states) correctly responded to the statement, "timber wolves, bald eagles and coyotes are all endangered species of animals." Possibly, the wording of this latter question contributed to the poor response.

A question was asked regarding self-perceived knowledge of eight relatively prominent wildlife management concerns, including two endangered species issues--the Tellico Dam/snail darter controversy and the Endangered Species Act. The results of this question are indicated in Table 19 and Figure 9 in order of most to least known issues.* The snail darter issue was next to last in level of perceived knowledge, with 70 percent of the public reporting very little or no knowledge of the issue. In contrast, the killing of baby seals for their fur was the most recognized issue, with more than twice the number of respondents indicating some knowledge of the issue. The Endangered Species Act was fourth in amount of public recognition, although 40 percent did indicate very little or no knowledge of the issue. The differences suggest the much greater impact of emotional issues involving specific, attractive and typically large, "higher" animals, as compared to issues which are somewhat abstract, largely involve indirect impacts resulting from habitat loss and deal with "lower" animals.

Finally, Figure 10 concerns the public's assumptions regarding the causes of species endangerment during the past twenty-five years in the U.S. Averaging estimates of the first and second most important reasons, chemical and industrial pollution was most frequently cited (31 percent). This result suggests a strong association in the public's mind of endangered species and pollution,

---

*This question actually explores the respondent's perceived awareness or familiarity with an issue not their factual knowledge about it. The knowledge of animals scale, to be discussed in a later section, tested the respondent's factual knowledge of animals.

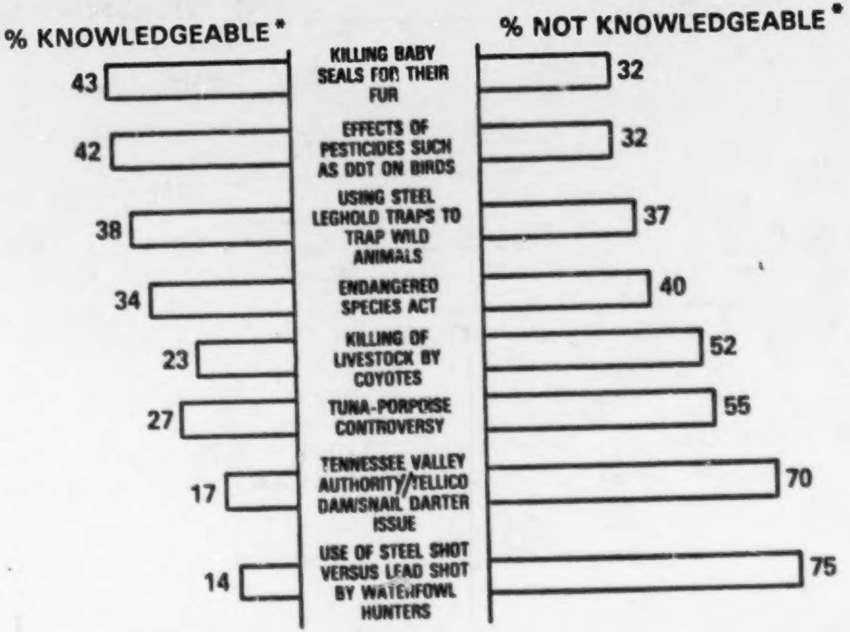
TABLE 19

AWARENESS OF SELECTED WILDLIFE ISSUES

	(1) VERY KNOWLEDGEABLE		(2) MODERATELY KNOWLEDGEABLE	(3) SLIGHTLY KNOWLEDGEABLE	(4) VERY LITTLE KNOWLEDGE		(5) NEVER HEARD OF IT	$\bar{X}$
KILLING BABY SEALS FOR THEIR FUR	(361) 14.7	43	(700) 28.5	(612) 24.9	(475) 19.3	32	(307) 12.5	2.86
EFFECTS OF PESTICIDES SUCH AS DDT ON BIRDS	(329) 13.4	42	(701) 28.6	(646) 26.3	(513) 20.9	32	(265) 10.8	2.87
USING STEEL LEGHOLD TRAPS TO TRAP WILD ANIMALS	(364) 14.8	38	(578) 23.5	(611) 24.9	(589) 24.0	37	(313) 12.8	2.96
ENDANGERED SPECIES ACT	(217) 8.9	34	(619) 25.3	(636) 26.0	(542) 22.1	40	(434) 17.7	3.14
KILLING OF LIVESTOCK BY COYOTES	(157) 6.4	23	(395) 16.1	(628) 25.6	(831) 33.9	52	(442) 18.0	3.40
TUNA-PORPOISE CONTROVERSY	(214) 8.7	27	(449) 18.4	(436) 17.8	(587) 24.0	55	(761) 31.1	3.49
TENNESSEE VALLEY AUTHORITY TELLICO DAM/ SNAIL DARTER ISSUE	(117) 4.8	17	(297) 12.1	(332) 13.5	(518) 21.1	70	(1187) 48.4	3.96
USE OF STEEL SHOT VERSUS LEAD SHOT BY WATERFOWL HUNTERS	(127) 5.2	14	(227) 9.2	(259) 10.6	(206) 28.8	75	(1135) 46.3	4.02

FIGURE 9

AWARENESS OF SELECTED WILDLIFE ISSUES

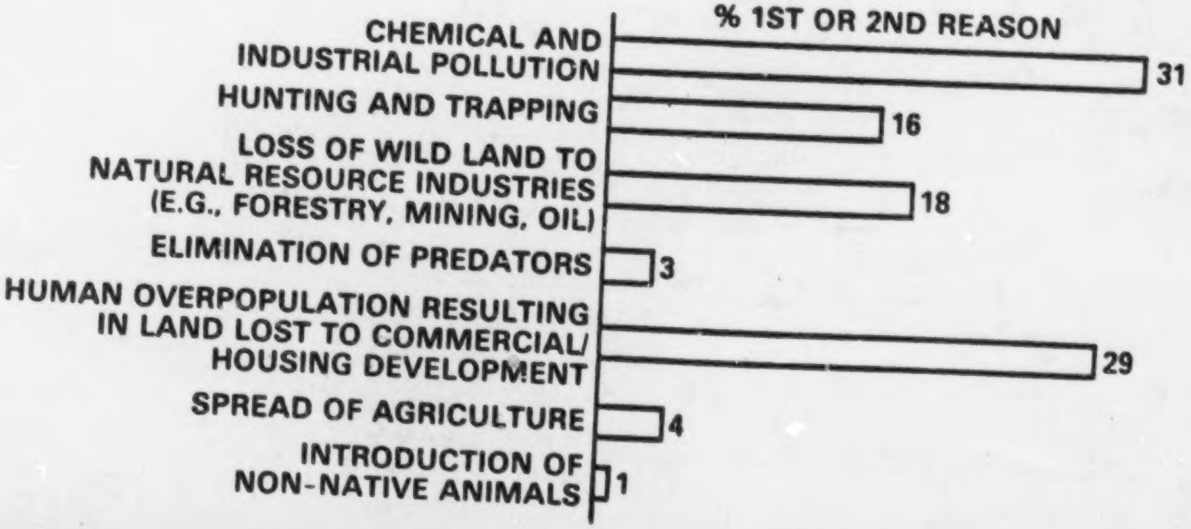


*THE 'KNOWLEDGEABLE' CATEGORY COMBINES THE VERY AND MODERATELY KNOWLEDGEABLE GROUPS; THE 'NOT KNOWLEDGEABLE', THE VERY LITTLE KNOWLEDGE AND NEVER HEARD OF IT GROUPS.

FIGURE 10

CAUSES OF ENDANGERED SPECIES

Please indicate the first and second most important reasons for the endangerment and extinction of the greatest number of wild animal species in the United States during the past 25 years.



although, historically, this factor has not been very important. Nearly 29 percent chose overpopulation as a major factor, and 18 percent linked species endangerment to loss of habitat to natural resource industries. Somewhat surprisingly, 16 percent of the public cited hunting and trapping as a major cause of species endangerment and extinction during the past 25 years.

**AMERICAN
MINING
CONGRESS**
FOUNDED 1897
SUITE 300
1920 N STREET NW
WASHINGTON
DC 20036
202/861•2800
TWX 710•822•0126

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•Executive Committee
†Honorary

January 8, 1982

The Honorable John H. Chafee, Chairman
Subcommittee on Environmental Pollution
Committee on Environment and Public Works
United States Senate
5229 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Senator Chafee:

During oversight hearings on the Endangered Species Act (December 8 and 10, 1981), you specifically requested industry to submit suggested changes to the Endangered Species Act. This letter constitutes the suggestions of the American Mining Congress.

The American Mining Congress is an industry association that encompasses: (1) producers of most of America's metals, coal and industrial and agricultural minerals; (2) manufacturers of mining and mineral processing machinery, equipment and supplies; and (3) engineering and consulting firms and financial institutions that serve the mining industry.

Enclosed is a side-by-side; the present Act is in the first column, and the suggested language in the second. In summary, our suggestions deal with the following major issues:

1. Section 7 in its entirety.

The proposal attempts to deal with streamlining process, placing consultation in proper perspective, and elimination of the currently unworkable exemption approach.

2. Elimination of lower life forms.

The importance of lower life forms in the food chain and their ecological niche is recognized. However, the ready substitution of species the myriad of them and the opportunity for mischievous and malicious legal maneuvers -- not to aid recovery, but for other unrelated purposes -- and, the drain of such actions upon already limited agency resources make it pragmatically prudent to narrow the scope of the Act.

3. A consideration of economic factors in the listing process.

Inasmuch as the single purpose of species preservation is, in most cases, applied to a multiple-use management philosophy on the Federal lands, a rule of reason needs to be acknowledged in the law that recognizes other single and multiple uses mandated by the Congress. Also, a means needs to be provided which deals with this issue more effectively than experience has shown for the exemption process.

4. Narrowing population and subspecies considerations.

Although no definition or process can bring to conclusion the age-old controversy between taxonomist "lumpers" and taxonomist "splitters", the protection of populations and subspecies under the same stringent legal requirements as species soon leads to reductio ad absurdum.

In addition to these issues, we recognize a need for dealing with experimental populations. We think such a category should be added to Section 4 and we have included some suggestions. However, on the basis of your remarks and colloquy during the oversight hearings, we would defer to the Fish and Wildlife Service for language on this issue.

Other issues can be handled through the regulatory process. We have carefully avoided their inclusion in our proposal, although they are of the utmost importance to your committee.

Finally, we must reluctantly take issue with your contention that questions of philosophy and conjecture concerning the Act should not be raised. I can assure you that, if a mining company is about to invest millions of borrowed dollars in a venture of 20 to 30 years duration and their lifeblood during that time span, their legal and financial officers most certainly consider "what if" scenarios concerning endangered species in their risk analyses. The importance of clearing up ambiguities in the law and regulations cannot be overemphasized.

Please allow us the opportunity to furnish your Subcommittee staff with clarification or amplification of our submission. Thank you for allowing us this occasion to comment.

Sincerely,

J. Allen Overton Jr.

J. Allen Overton, Jr.
President

Attachments

American Mining Congress 1/7/7:—

PRESENT

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Endangered Species Act of 1973".

TABLE OF CONTENTS

Sec. 2 Findings, purposes, and policy.
Sec. 3 Definitions.
Sec. 4 Determination of endangered species and threatened species.
Sec. 5 Land acquisition.
Sec. 6 Cooperation with the States.
Sec. 7 Interagency cooperation.
Sec. 8 International cooperation.
Sec. 8A. Convention implementation.
Sec. 9 Prohibited acts.
Sec. 10 Exceptions.
Sec. 11 Penalties and enforcement.
Sec. 12 Endangered plants.
Sec. 13 Conforming amendments.
Sec. 14 Repealer.
Sec. 15 Authorization of appropriations.
Sec. 16 Effective date.
Sec. 17 Marine Mammal Protection Act of 1972.

PROPOSED

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Endangered Species Act of 1973".

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Sec. 16 Effective date.
Sec. 17 Marine Mammal Protection Act of 1972.

FINDINGS, PURPOSES, AND POLICY

SEC. 2 (a) FINDINGS. — The Congress finds and declares that —

(1) various species of fish, wildlife, and plants in the United States have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation.

(2) other species of fish, wildlife, and plants have been so depleted in numbers that they are in danger of or threatened with extinction.

(3) these species of fish, wildlife, and plants are of esthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people.

(4) The United States has pledged itself as a sovereign state in the international community to conserve to the extent practicable the various species of fish or wildlife and plants facing extinction, pursuant to —

(A) migratory bird treaties with Canada and Mexico.

(B) the Migratory and Endangered Bird Treaty with Japan.

(C) the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere.

(D) the International Convention for the Northwest Atlantic Fisheries.

(E) the International Convention for the High Seas Fisheries of the North Pacific Ocean.

(F) the Convention on International Trade in Endangered Species of Wild Fauna and Flora, and

(G) other international agreements

(5) encouraging the States and other interested parties through Federal financial assistance and a system of incentives, to develop and maintain conservation programs which meet national and international standards is a key to meeting the Nation's international commitments and to better safeguarding, for the benefit of all citizens, the Nation's heritage in fish, wildlife, and plants.

[(5) amended by PL 96-159]

(b) PURPOSES. — The purposes of this Act are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in subsection (a) of this section.

(c) POLICY. — It is further declared to be the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act.

FINDINGS, PURPOSES, AND POLICY

SEC. 2 (a) FINDINGS. — The Congress finds and declares that —

(1) various species of fish, wildlife, and plants in the United States have **been rendered** become extinct or been in danger of or threatened with extinction as a consequence of natural changes in the environment as well as economic growth and development. **untempered by adequate concern and conservation;**

(2) these species of fish, wildlife, and plants are of esthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people.

(3) The United States has pledged itself as a sovereign state in the international community to conserve to the extent practicable the various species of fish or wildlife and plants facing extinction, pursuant to —

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[(5) amended by PL 96-159]

(5 the economic and social benefits of projects affected by this Act be given consideration in the decision making process to protect endangered and threatened species.

(b) PURPOSES. - The purposes of this Act are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to the extent that such conservation is consistent with other national interests, to provide a program for the conservation of such endangered species and threatened species, and to take such prudent and feasible steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in subsection (a) of this section.

(c) POLICY — It is further declared to be the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act

DEFINITIONS

SEC. 3 For the purposes of this Act —

(1) The term 'alternative courses of action' means all alternatives and thus is not limited to original project objectives and agency jurisdiction.

[(1) added by PL 95-632]

(2) The term "commercial activity" means all activities of industry and trade, including, but not limited to, the buying or selling of commodities and activities conducted for the purpose of facilitating such buying and selling: *Provided, however,* That it does not include exhibitions of commodities by museums or similar cultural or historical organizations.

(3) The terms "conserve", "conserving", and "conservation" mean to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

(4) The term "Convention" means the Convention on International Trade in Endangered Species of Wild Fauna and Flora, signed on March 3, 1973, and the appendices thereto.

(5)(A) The term 'critical habitat' for a threatened or endangered species means—

(i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of this Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection, and

(ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of this Act, upon a determination by the Secretary that such areas are essential for the conservation of the species.

(B) Critical habitat may be established for those species now listed as threatened or endangered species for which no critical habitat has heretofore been established as set forth in subparagraph (A) of this paragraph.

(C) Except in those circumstances determined by the Secretary, critical habitat shall not include the entire geographical area which can be occupied by the threatened or endangered species.

[(5) added by PL 95-632]

(6) The term "endangered species" means any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man.

(7) The term 'Federal agency' means any department, agency, or instrumentality of the United States.

[(7) added by PL 95-632]

DEFINITIONS

SEC. 3 For the purposes of this Act — "and any regulations to implement this Act" —

The term "commercial activity" means all activities of industry and trade, including, but not limited to, the buying or selling of commodities and activities conducted for the purpose of facilitating such buying and selling: *Provided, however,* That it does not include exhibitions of commodities by museums or similar cultural or historical organizations.

(~~3~~ The terms "conserve", "conserving", and "conservation" mean to use and the use of all prudent and feasible methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and~~, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include~~ regulated taking.

The term "Convention" means the Convention on International Trade in Endangered Species of Wild Fauna and Flora, signed on March 3, 1973, and the appendices thereto.

(A) The term "critical habitat" for a threatened or endangered species means -

(i) the specific bounded areas within the geographic area occupied naturally by the species, at the time it is listed and published in the Federal Register in accordance with the provisions of section 4 of this Act, ~~on which are found those physical or biological features~~ that are needed for critical life stages which are (I) essential to the ~~conservation~~ survival and continued existence of the species and (II) which may require special management considerations or protection; and

(ii) specific bounded areas outside the geographic area occupied naturally by the species at the ime it is listed in accordance with the provisions of section 4 of this Act, upon a determination by the Secretary that such areas are essential for the ~~conservation~~ continued existence of the species.

(B) Critical habitat ~~may~~ will be established and published in the Federal Register for those species now listed as threatened or endangered species for which no critical habitat has heretofore been established as set forth in subparagraph (A) of this paragraph.

(C) Except in those circumstances determined by the Secretary, critical habitat shall not include (i) either the entire geographical area which can be occupied by the threatened or endangered species; or (ii) the area occupied by the species historically but not occupied in accordance with the provisions of section 4 of this Act; or the area occupied by experimental populations established through experimental technology or mitigation activities pursuant to section 4 and section 7 of this Act.

The term "endangered species" means any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man

OF VERTEBRATE
ANIMALS AND THE
PHYLLUM CHORDATA
AND THE DIVISIONS
SPERMATOPHYTA AND
PTERIDOPHYTH.

"If the members of the species are adequate in one part of its natural range, but rare only in certain other parts of its natural range, it shall not be deemed endangered or threatened."

(7) The term 'Federal agency' means any department, agency, or instrumentality of the United States.
[(7) added by PL95-632]

(8) The term "fish or wildlife" means any member of the animal kingdom, including without limitation any mammal, fish, bird (including any migratory, nonmigratory, or endangered bird for which protection is also afforded by treaty or other international agreement), amphibian, reptile, mollusk, crustacean, arthropod or other invertebrate, and includes any part, product, egg, or offspring thereof, or the dead body or parts thereof.

(9) The term "foreign commerce" includes, among other things, any transaction—

(A) between persons within one foreign country;

(B) between persons in two or more foreign countries;

(C) between a person within the United States and a person in a foreign country; or

(D) between persons within the United States, where the fish and wildlife in question are moving in any country or countries outside the United States.

(10) The term "import" means to land on, bring into, or introduce into, or attempt to land on, bring into, or introduce into, any place subject to the jurisdiction of the United States, whether or not such landing, bringing, or introduction constitutes an importation within the meaning of the customs laws of the United States.

(11) The term "irresolvable conflict" means, with respect to any action authorized, funded, or carried out by a Federal agency, a set of circumstances under which, after consultation as required in section 7(a) of this Act, completion of such action would violate section 7(a)(2).

(12) The term "permit or license applicant" means, when used with respect to an action of a Federal agency for which exemption is sought under section 7, any person whose application to such agency for a permit or license has been denied primarily because of the application of section 7(a) to such agency action.

[(11), (12) added by PL 95-632, (11) amended by PL 96-159]

(13) The term "person" means an individual, corporation, partnership, trust, association, or any other private entity, or any officer, employee, agent, department, or instrumentality of the Federal Government, of any State or political subdivision thereof, or of any foreign government.

(14) The term "plant" means any member of the plant kingdom, including seeds, roots and other parts thereof.

(15) The term "Secretary" means, except as otherwise herein provided, the Secretary of the Interior or the Secretary of Commerce as program responsibilities are vested pursuant to the provisions of Reorganization Plan Numbered 4 of 1970; except that with respect to the enforcement of the provisions of this Act and the Convention which pertain to the importation or exportation of terrestrial plants, the term means the Secretary of Agriculture.

(16) The term "species" includes any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature.

[(16) amended by PL 95-632]

([illegible]) The term "fish or wildlife" means any member of the animal kingdom, ~~including without limitation any mammal, fish, bird (including any migratory, nonmigratory, or endangered bird for which protection is also afforded by treaty or other international agreement), amphibian, reptile, mollusk, crustacean, arthropod or other invertebrate,~~ and includes any part, product, egg, or offspring thereof, or the dead body or parts thereof.

VERTEBRATE (PHYLLUM CHORDATA)

([illegible]) The term "foreign commerce" includes, among other things, any transaction—

(A) between persons within one foreign country;

(B) between persons in two or more foreign countries;

(C) between a person within the United States and a person in a foreign country; or

(D) between persons within the United States, where the fish and wildlife in question are moving in any country or countries outside the United States.

([illegible]) The term "import" means to land on, bring into, or introduce into, or attempt to land on, bring into, or introduce into, any place subject to the jurisdiction of the United States, whether or not such landing, bringing, or introduction constitutes an importation within the meaning of the customs laws of the United States.

([illegible]) The term "person" means an individual, corporation, partnership, trust, association, or any other private entity, or any officer, employee, agent, department, or instrumentality of the Federal Government, of any State or political subdivision thereof, or of any foreign government.

([illegible]) The term "plant" means any member of ~~the plant kingdom~~, including seeds, roots and other parts thereof.

DIVISIONS SPERMATOPHYTA AND PTERIDOPHYTA

(15) The term "Secretary" means, except as otherwise herein provided, the Secretary of the Interior or the Secretary of Commerce as program responsibilities are vested pursuant to the provisions of Reorganization Plan Numbered 4 of 1970; except that with respect to the enforcement of the provisions of this Act and the Convention which pertain to the importation or exportation of terrestrial plants, the term means the Secretary of Agriculture.

([illegible]) the term "species" means a group of physically similar organisms capable of interbreeding but generally incapable of producing fertile offspring through breeding with organisms outside this group.

"The term species does not include any subspecies or variety of fish, wildlife, or plants."

(17) The term "State" means any of the several States, the District of Columbia, the Commonwealth of Puerto Rico, American Samoa, the Virgin Islands, Guam, and the Trust Territory of the Pacific Islands.

(18) The term 'State agency' means any State agency, department, board, commission, or other governmental entity which is responsible for the management and conservation of fish, plant, or wildlife resources within a State.

[(18) amended by PL 95-632]

(19) The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

(20) The term "threatened species" means any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

(21) The term "United States," when used in a geographical context, includes all States.

([illegible]) The term "State" means any of the several States, the District of Columbia, the Commonwealth of Puerto Rico, American Samoa, the Virgin Islands, Guam, and the Trust Territory of the Pacific Islands.

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[([illegible]) amended by PL 95-632]

([illegible]) the term "take" means pursue, hunt, shoot, wound, kill, trap, or collect, or to attempt to engage in any such conduct, for the purpose of removing an animal or plant or reducing it to possession.

([illegible]) The term "threatened species" means any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

([illegible]) the term "United States," when used in a geographical context, includes all states, possessions and territories.

DETERMINATION OF ENDANGERED SPECIES AND THREATENED SPECIES

SEC 4 (a) GENERAL — (1) The Secretary shall by regulation determine whether any species is an endangered species or a threatened species because of any of the following factors

(1) the present or threatened destruction, modification, or curtailment of its habitat or range.

(2) overutilization for commercial, sporting, scientific, or educational purposes.

(3) disease or predation.

(4) the inadequacy of existing regulatory mechanisms, or

(5) other natural or manmade factors affecting its continued existence

At the time any such regulation is proposed, the Secretary shall also by regulation, to the maximum extent prudent, specify any habitat of such species which is then considered to be critical habitat. The requirement of the preceding sentence shall not apply with respect to any species which was listed prior to enactment of the Endangered Species Act Amendments of 1978

[(4)(a)(1) revised by PL 95-632]

(2) With respect to any species over which program responsibilities have been vested in the Secretary of Commerce pursuant to Reorganization Plan Numbered 4 of 1970—

(A) in any case in which the Secretary of Commerce determines that such species should—

(i) be listed as an endangered species or a threatened species, or

(ii) be changed in status from a threatened species to an endangered species, he shall so inform the Secretary of the Interior, who shall list such species in accordance with this section.

(B) in any case in which the Secretary of Commerce determines that such species should—

(i) be removed from any list published pursuant to subsection (c) of this section, or

(ii) be changed in status from an endangered species to a threatened species, he shall recommend such action to the Secretary of the Interior, and the Secretary of the Interior, if he concurs in the recommendation, shall implement such action, and

(C) the Secretary of the Interior may not list or remove from any list any such species, and may not change the status of any such species which are listed, without a prior favorable determination made pursuant to this section by the Secretary of Commerce

(b) BASIS FOR DETERMINATIONS. — (1) The Secretary shall make determinations required by subsection (a) of this section on the basis of the best scientific and commercial data available to him after conducting a review of the status of the species and after consultation, as appropriate, with the affected States, interested persons and organizations, other interested Federal agencies, and, in cooperation with the Secretary of State, with the country or countries in which the species concerned is normally found or whose citizens harvest such species on the high seas, except that in any case in which such determinations involve resident species of fish or wildlife, the

DETERMINATION OF ENDANGERED SPECIES AND THREATENED SPECIES

SEC.4.(a)GENERAL. - (1) The Secretary shall by regulation determine whether any species is an endangered species or a threatened species because of any of the following factors:

(1) the present or threatened destruction, modification, or curtailment of its habitat or range due to human activities;

(2) overutilization for commercial, sporting, scientific, or educational purposes;

~~(3) disease, or predation or other natural factors;~~

(4) the inadequacy of existing regulatory mechanisms;

(5) other natural or manmade factors affecting its continued existence.

At the time any such regulation is proposed, the Secretary shall also by regulation, ~~to the maximum extent prudent specify~~ designate any specific habitat of such species which is then considered by best available scientific data to be critical habitat.

The Secretary shall, within two years after the effective date of this Statute, specify the critical habitat of any species listed prior to the effective date of this Statute."

(2) With respect to any species over which program responsibilities have been vested in the Secretary of Commerce pursuant to Reorganization Plan Numbered 4 of 1970—

(A) in any case in which the Secretary of Commerce determines that such species should—

(i) be listed as an endangered species or a threatened species, or

(ii) be changed in status from a threatened species to an endangered species, he shall so inform the Secretary of the Interior, who shall ~~list such species in accordance with this section.~~ IMPLEMENT SUCH ACTION.

~~(B) in any case in which the Secretary of Commerce determines that such species should—~~

(iii) ~~(i)~~ be removed from any list published pursuant to subsection (c) of this section, or

(iv) ~~(ii)~~ be changed in status from an endangered species to a threatened species, he shall recommend such action to the Secretary of the Interior, and the Secretary of the Interior, if he concurs in the recommendation, shall implement such action, and

(C) the Secretary of the Interior may not list or remove from any list any such species, and may not change the status of any such species which are listed, without a prior favorable determination made pursuant to this section by the Secretary of Commerce.

(b) BASIS FOR DETERMINATIONS. — (1) The Secretary shall make determinations required by subsection (a) of this section on the basis of the best scientific and commercial data available to him after conducting a review of the status of the species and after consultation, as appropriate, with the affected States, interested persons and organizations, other interested Federal agencies, and, in cooperation with the Secretary of State, with the country or countries in which the species concerned is normally found or whose citizens harvest such species on the high seas; except that in any case in which such determinations involve resident species of fish or wildlife, the

Secretary of the Interior may not add such species to, or remove such species from, any list published pursuant to subsection (c) of this section, unless the Secretary has first—

[(b) amended by PL 96-159]

(A) published notice in the Federal Register and notified the Governor of each State within which such species is then known to occur that such action is contemplated

(B) allowed each such State 90 days after notification to submit its comments and recommendations, except to the extent that such period may be shortened by agreement between the Secretary and the Governor or Governors concerned; and

(C) published in the Federal Register a summary of all comments and recommendations received by him which relate to such proposed action

(2) In determining whether or not any species is an endangered species or a threatened species, the Secretary shall take into consideration those efforts, if any, being made by any nation or any political subdivision of any nation to protect such species, whether by predator control, protection of habitat and food supply, or other conservation practices, within any area under the jurisdiction of any such nation or political subdivision, or on the high seas.

(3) Species which have been designated as requiring protection from unrestricted commerce by any foreign country, or pursuant to any international agreement, shall receive full consideration by the Secretary to determine whether each is an endangered species or a threatened species.

Secretary of the Interior may not add such species to, or remove such species from, any list published pursuant to subsection (c) of this section, unless the Secretary has first—

[(b) amended by PL 96-159]

(A) published notice in the Federal Register and notified the Governor of each State within which such species is then known to occur that such action is contemplated

(B) allowed each such State ~~90~~ 60 days after notification to submit its comments and recommendations, except to the extent that such period may be shortened by agreement between the Secretary and the Governor or Governors concerned; and

(C) published in the Federal Register a summary of all comments and recommendations receive by him which relate to such proposed action.

(D) published in the Federal Register the specific critical habitat(s) in each state within which such species is then known to occur.

(2) In determining whether or not any foreign species is an endangered species or a threatened species, the Secretary shall take into consideration those efforts, if any, being made by any nation or political subdivision of any nation to protect such species, whether by predator control, protection or management of habitat and food supply, or other conservation practices, within any area under the jurisdiction of any such nation or political subdivision, or on the high seas.

(3) Species which have been designated as requiring protection from unrestricted commerce by any foreign country, or pursuant to any international agreement, shall receive full consideration by the Secretary to determine whether each is an endangered species or a threatened species.

(4) In determining the critical habitat of any endangered or threatened species, the Secretary shall consider the economic impact, and any other relevant impacts, of specifying any particular area as critical habitat, and he may exclude any such area from the critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying the area as part of the critical habitat, unless he determines, based on the best scientific and commercial data available, that the failure to designate such area as critical habitat will result in the extinction of the species.

[(4) added by PL 95-632]

(c) LISTS. — (1) The Secretary of the Interior shall publish in the Federal Register, and from time to time he may by regulation revise, a list of all species determined by him or the Secretary of Commerce to be endangered species and a list of all species determined by him or the Secretary of Commerce to be threatened species. Each list shall refer to the species contained therein by scientific and common name or names, if any, specify with respect to each such species over what portion of its range it is endangered or threatened, and specify any critical habitat within such range.

(2) The Secretary shall, within 90 days of the receipt of the petition of an interested person under subsection 553(e) of title 5, United States Code, conduct and publish in the Federal Register a review of status of any listed or unlisted species proposed to be removed from or added to either of the list published pursuant to paragraph (1) of this subsection, but only if he makes and publishes a finding that such person has presented substantial evidence which in his judgment warrants such a review. Such review and finding shall be made and published prior to the initiation of any procedures under subsection (b)(1).

(3) Any list in effect on the day before the date of the enactment of this Act of species of fish or wildlife determined by the Secretary of the Interior, pursuant to the Endangered Species Conservation Act of 1969, to be threatened with extinction shall be republished to conform to the classification for endangered species or threatened species, as the case may be, provided for in this Act, but until such republication, any such species so listed shall be deemed an endangered species within the meaning of the Act. The republication of any species pursuant to this paragraph shall not require public hearing or comment under section 553 of title 5, United States Code.

(4) In determining the critical habitat of any endangered or threatened species, the Secretary shall consider the economic impact, and any other relevant impacts, of specifying any particular areas as critical habitat, and he ~~may~~ shall exclude any such area from the critical habitat (i) if he determines that the benefits of such exclusion outweigh the benefits specifying the area as part of the critical habitat, unless he determines, based on the best scientific and commercial data available, that the failure to designate such area as critical habitat will result in the extinction of the species; (ii) if the area was not previously occupied by an endangered species or threatened species but became occupied by an experimental population through, but not limited to, experimental technologies such as translocation and artificial propagation and the results of mitigation activities.

(c) LISTS. — (1) The Secretary of the Interior shall publish in the Federal Register, and from time to time he may by regulation revise, a list of all species determined by him or the Secretary of Commerce to be endangered species and a list of all species determined by him or the Secretary of Commerce to be threatened species. Each list shall refer to the species contained therein by scientific and common name or names, if any, specify with respect to each such species over what portion of its range it is endangered or threatened, and specify any critical habitat within such range.

(2) The Secretary shall, within 90 days of the receipt of the petition of an interested person under subsection 553(e) of title 5, United States Code, conduct and publish in the Federal Register a review of status of any listed or unlisted species proposed to be removed from or added to either of the list published pursuant to paragraph (1) of this subsection, but only if he makes and publishes a finding that such person has presented substantial evidence which in his judgment warrants such a review. Such review and finding shall be made and published prior to the initiation of any procedures under subsection (b)(1).

(3) Any list in effect on the day before the date of the enactment of this Act of species of fish or wildlife determined by the Secretary of the Interior, pursuant to the Endangered Species Conservation Act of 1969, to be threatened with extinction shall be republished to conform to the classification for endangered species or threatened species, as the case may be, provided for in this Act, but until such republication, any such species so listed shall be deemed an endangered species within the meaning of the Act. The republication of any species pursuant to this paragraph shall not require public hearing or comment under section 553 of title 5, United States Code.

(4) The Secretary shall —

(A) conduct, at least once every five years, a review of all species included in a list which is published pursuant to paragraph (1) and which is in effect at the time of such review; and

(B) determine on the basis of such review whether any such species should--

(i) be removed from such list;

(ii) be changed in status from an endangered species to a threatened species; or

(iii) be changed in status from a threatened species to an endangered species.

Each determination under subparagraph (B) shall be made in accordance with the provisions of subsections (a) and (b).

[4(c) revised by PL 95-632]

(d) PROTECTIVE REGULATIONS. — Whenever any species is listed as a threatened species pursuant to subsection (c) of this section, the Secretary shall issue such regulations as he deems necessary and advisable to provide for the conservation of such species. The Secretary may by regulation prohibit with respect to any threatened species any act prohibited under section 9(a)(1), in the case of fish or wildlife, or section 9(a)(2), in the case of plants, with respect to endangered species, except that with respect to the taking of resident species of fish or wildlife, such regulations shall apply in any State which has entered into a cooperative agreement pursuant to section 6(c) of this Act only to the extent that such regulations have also been adopted by such State

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(4) The Secretary shall -

(A) conduct, at least once every ~~five~~ three years, a review of all species included in a list which is published pursuant to paragraph (1) and which is in effect at the time of such review; and

(B) determine on the basis of such review whether any such species should -

(i) be removed from such list;

(ii) be changed in status from an endangered species to a threatened species; or

(iii) be changed in status from a threatened species to an endangered species.

(iv) have its specific critical habitat boundaries changed based on new scientific and commercial data.

Each determination under subparagraph (B) shall be made in accordance with the provisions of subsections (a) and (b).

(d) PROTECTIVE REGULATIONS. - Whenever any species is listed as a threatened species pursuant to subsection (c) of this section, the Secretary shall issue such regulations as he deems necessary and advisable to provide for the conservation of such species, with an emphasis on those regulations which encourage research on interactions of management and population effects. The Secretary may by regulation prohibit with respect to any threatened species any act prohibited under section 9(a)(1), in the case of fish or wildlife, or section 9(a)(2), in the case of plants, with respect to endangered species; except that with respect to the taking of resident species of fish or wildlife, such regulations shall apply in any State which has entered into a cooperative agreement pursuant to section 6(a) of this Act only to the extent that such regulations have also been adopted by such

(e) SIMILARITY OF APPEARANCE CASES — The Secretary may, by regulation, and to the extent he deems advisable, treat any species as an endangered species or threatened species even though it is not listed pursuant to section 4 of this Act if he finds that —

(A) such species so closely resembles in appearance, at the point in question, a species which has been listed pursuant to such section that enforcement personnel would have substantial difficulty in attempting to differentiate between the listed and unlisted species;

(B) the effect of this substantial difficulty is an additional threat to an endangered or threatened species; and

(C) such treatment of an unlisted species will substantially facilitate the enforcement and further the policy of this Act.

(e) SIMILARITY OF APPEARANCE CASES. - The Secretary may, by regulation, and to the extent he deems advisable, treat any species as an endangered species or threatened species even though it is not listed pursuant to section 4 of this Act provided that all procedures in subsections (b) and (f) of this section have been followed in the same manner as though the species were to be listed as threatened or endangered ~~if he finds that~~ -

(A) such species so closely resemble in appearance, at the point in question, a species which has been listed pursuant to such section that enforcement personnel ~~would have substantial difficulty in attempting to differentiate~~ using the best available scientific and commercial data would not be capable of differentiating between the listed and unlisted species.

(B) the effect of this ~~substantial difficulty~~ resemblance in appearance is an ~~additional~~ a substantial threat to an endangered or threatened species.~~; and~~

~~(C) such treatment of an unlisted species will substantially facilitate the enforcement and further the policy of this Act.~~

(f) REGULATIONS — (1) Except as provided in paragraphs (2) and (3) of this subsection and subsection (b) of this section, the provisions of section 553 of title 5, United States Code (relating to rulemaking procedures), shall apply to any regulation promulgated to carry out the purposes of this Act

(2) (A) Except as provided in subparagraph (B), the case of any regulation proposed by the Secretary to carry out the purposes of this Act —

(i) the Secretary shall publish general notice of the proposed regulation (including the complete text of the regulation) in the Federal Register not less than 60 days before the effective date of the regulation, and

(ii) if any person who feels that he may be adversely affected by the proposed regulation files (within 45 days after the date of publication of general notice) objections thereto and requests a public hearing thereon, the Secretary may grant such request, but shall, if he denies such request, publish his reasons therefor in the Federal Register

(B) In the case of any regulation proposed by the Secretary to carry out the purposes of this section with respect to the determination and listing of endangered or threatened species and their critical habitats in any State (other than regulations to implement the Convention) the Secretary—

(i) shall publish general notice of the proposed regulation (including the complete text of the regulation), not less than 60 days before the effective date of the regulation, shall publish —

(I) a general notice and the complete text of the proposed regulation in the Federal Register, and

(II) if the proposed regulation specifies any critical habitat, general notice of the regulation (including a summary of the text, and a map of the proposed critical habitat) in a newspaper of general circulation within or adjacent to such habitat.

[(i) and (II) amended by PL 96-159]

(f) REGULATIONS — (1) Except as provided in paragraphs (2) and (3) of this subsection and subsection (b) of this section, the provisions of section 553 of title 5, United States Code (relating to rulemaking procedures), shall apply to any regulation promulgated to carry out the purposes of this Act

(2) (A) Except as provided in subparagraph (B), the case of any regulation proposed by the Secretary to carry out the purposes of this Act —

(i) the Secretary shall publish general notice of the proposed regulation (including the complete text of the regulation) in the Federal Register not less than 60 days before the effective date of the regulation, and

(ii) if any person who feels that he may be adversely affected by the proposed regulation files (within 45 days after the date of publication of general notice) objections thereto and requests a public hearing thereon, the Secretary may grant such request, but shall, if he denies such request, publish his reasons therefor in the Federal Register

(B) In the case of any regulation proposed by the Secretary to carry out the purposes of this section with respect to the determination and listing of endangered or threatened species and their critical habitats in any State (other than regulations to implement the convention), the Secretary -

(i) shall publish general notice of the proposed regulation (including the complete text of the regulation), not less than 60 days before the effective date of the regulation, and shall publish -

(I) a general notice and the complete text of the proposed regulation including a map of the proposed critical habitat in the Federal Register, and

(II) **if the proposed regulation specifies any critical habitat,** general notice of the regulation (including a summary of the text, and a map of the proposed critical habitat) in a newspaper of general circulation within or adjacent to such habitat;

(ii) shall offer for publication in appropriate scientific journals the substance of the Federal Register notice referred to in clause (i)(I);

(iii) shall give actual notice of the proposed regulation (including the complete text of the regulation) and any environmental assessment or environmental impact statement prepared on the proposed regulation, not less than 60 days before the effective date of the regulation to all general local governments located within or adjacent to the proposed critical habitat, if any, and

(iv) shall—

(I) if the proposed regulation does not specify any critical habitat, promptly hold a public meeting on the proposed regulation within or adjacent to the area in which the endangered or threatened species is located, if request therefor is filed with the Secretary by any person within 45 days after the date of publication of general notice under clause (i)(I), and

(II) if the proposed regulation specifies any critical habitat, promptly hold a public meeting on the proposed regulation within the area in which such habitat is located in each State, and if requested within 15 days after the date on which the public meeting is conducted, hold a public hearing in each such State.

[(ii) amended by PL 96-159]

If a public meeting or hearing is held on any regulation, the regulation may not take effect before the 60th day after the date on which the meeting or hearing is concluded, and if more than one public meeting or hearing is

(ii) shall offer for publication in appropriate scientific journals the substance of the Federal Register notice referred to in clause (i)(I);

(iii) shall give actual notice of the proposed regulation (including the complete text of the regulation), and any environmental assessment, ~~or~~ environmental impact statement, and economic evaluation prepared on the proposed regulation, not less than 60 days before the effective date of the regulation to all general local governments located within or adjacent to the proposed critical habitat, ~~if any,~~ and

(iv) shall -

(I) ~~if the proposed regulation does not specify any critical habitat,~~ promptly hold a public meeting on the proposed regulation within or adjacent to the area in which the endangered or threatened species is located, if request therefor is filed with the Secretary by any person within 45 days after the date of publication of general notice under clause (i)(I), and

(II) ~~if the proposed regulation specifies any critical habitat,~~ promptly hold a public meeting on the proposed regulation within the area in which such critical habitat is located in each State, and if requested within 15 days after the date on which the public meeting is conducted, hold a public hearing in each such State.

If a public meeting or hearing is held on any regulation, the regulation may not take effect before the 60th day after the date on which the meeting or hearing is concluded, and if more than one public meeting or hearing is held, before the 60th day after the date on which the last such meeting or hearing is concluded. Any accidental failure to provide actual notice under clause (ii) to all general local governments required to be given notice shall not invalidate the proposed regulation.

[Sec. 4(f)(2)(B) added by PL 95-632]

(C) Neither subparagraph (A) or (B) of this paragraph, subsection (b)(4) of this section, nor section 553 of title 5, United States Code, shall apply in the case of any of the following regulations and any such regulation shall, at the discretion of the Secretary, take effect immediately upon publication of the regulation in the Federal Register:

[(C) amended by PL 96-159]

(i) Any regulation appropriate to carry out the purposes of this Act which was originally promulgated to carry out the Endangered Species Conservation Act of 1969.

(ii) Any regulation (including any regulation implementing section 4(g)(2)(B)(ii) of this Act) issued by the Secretary in regard to any emergency posing a significant risk to the well-being of any species of fish or wildlife or plants, but only if (I) at the time of publication of the regulation in the Federal Register the Secretary publishes therein detailed reasons why such regulation is necessary, and (II) in the case such regulation applies to resident species of fish, wildlife, and plants, the requirements of subsection (b)(1)(A) of this section have been complied with. Any regulation promulgated under the authority of this clause (ii) shall cease to have force and effect at the close of the 240-day period following the date of publication unless, during such 240-day period, the rulemaking procedures which would apply to such regulation without regard to this subparagraph are complied with. If at any time after issuing an emergency regulation the Secretary determines, on the basis of the best scientific and commercial data available to him, that substantial evidence does not exist to warrant such regulation, he shall withdraw it.

[(ii) amended by PL 96-159]

(3) The publication in the Federal Register of any proposed or final regulation which is necessary or appropriate to carry out the purposes of this Act shall include a summary by the Secretary of the data on which such regulation is based and shall show the relationship of such data to such regulation.

[(3) revised by PL 95-632]

(4) Any proposed or final regulation which specifies any critical habitat of any endangered species or threatened species shall be based on the best scientific data available, and the publication in the Federal Register of any such regulation shall, to the maximum extent practicable, be accompanied by a brief description

held, before the 60th day after the date on which the last such meeting or hearing is concluded. Any accidental failure to provide actual notice under clause (ii) to all general local government required to be given notice shall not invalidate the proposed regulation.

(C) Neither subparagraph (A) or (B) of this paragraph, subsection (b)(4) of this section, nor section 553 of title 5, United States Code, shall apply in the case of any of the following regulations and any such regulation shall, at the discretion of the Secretary, take effect immediately upon publication of the regulation in the Federal Register:

[(C) amended by PL 96-159]

(i) Any regulation appropriate to carry out the purposes of this Act which was originally promulgated to carry out the Endangered Species Conservation Act of 1969.

(ii) Any regulation (including any regulation implementing section 4(g)(2)(B)(ii) of this Act) issued by the Secretary in regard to any emergency posing a significant risk to the well-being of any species of fish or wildlife or plants, but only if (I) at the time of publication of the regulation in the Federal Register the Secretary publishes therein detailed reasons why such regulation is necessary, and (II) in the case such regulation applies to resident species of fish, wildlife, and plants, the requirements of subsection (b)(1)(A) of this section have been complied with. Any regulation promulgated under the authority of this clause (ii) shall cease to have force and effect at the close of the 240-day period following the date of publication unless, during such 240-day period, the rulemaking procedures which would apply to such regulation without regard to this subparagraph are complied with. If at any time after issuing an emergency regulation the Secretary determines, on the basis of the best scientific and commercial data available to him, that substantial evidence does not exist to warrant such regulation, he shall withdraw it.

[(ii) amended by PL 96-159]

(3) The publication in the Federal Register of any proposed or final regulation which is necessary or appropriate to carry out the purposes of this Act shall include a summary by the Secretary of the data on which such regulation is based and shall show the relationship of such data to such regulation.

[(3) revised by PL 95-632]

(4) Any proposed or final regulation which specifies any critical habitat of any endangered species or threatened species shall be based on the best commercial and scientific data available at the time, and the publication in the Federal Register of any such regulation, shall, to the maximum extent practical, be accompanied by a brief description and evaluation including an economic evaluation of those activities (whether public or private) which, in the opinion of the Secretary, if undertaken may adversely modify such critical habitat, or may be impacted by such designation.

and evaluation of those activities (whether public or private) which, in the opinion of the Secretary, if undertaken may adversely modify such habitat, or may be impacted by such designation.

(5) A final regulation adding a species to any list published pursuant to subsection (c) shall be published in the Federal Register not later than two years after the date of publication of notice of the regulation proposing such listing under paragraph (B)(i). If a final regulation is not adopted within such two-year period, the Secretary shall withdraw the proposed regulation and shall publish notice of such withdrawal in the Federal Register not later than 30 days after the end of such period. The Secretary shall not propose a regulation adding to such a list any species for which a proposed regulation has been withdrawn under this paragraph unless he determines that sufficient new information is available to warrant the proposal of a regulation. No proposed regulation for the listing of any species published before the date of the enactment of the Endangered Species Act Amendments of 1978 shall be withdrawn under this paragraph before the end of the one-year period beginning on such date of enactment.

[§4(f)(4) and (5) added by PL 95-632]

(g) Recovery Plans. — The Secretary shall develop and implement plans (hereinafter in this subsection referred to as "recovery plans") for the conservation and survival of endangered species and threatened species listed pursuant to this section, unless he finds that such a plan will not promote the conservation of the species. The Secretary, in developing and implementing recovery plans, may procure the services of appropriate public and private agencies and institutions, and other qualified persons. Recovery teams appointed pursuant to this subsection shall not be subject to the Federal Advisory Committee Act.

[Sec. 4(g) added by PL 95-632]

(h) Agency Guidelines. — The Secretary shall establish, and publish in the Federal Register, agency guidelines to insure that the purposes of this section are achieved efficiently and effectively. Such guidelines shall include, but are not limited to —

(1) procedures for recording the receipt and the disposition of petitions submitted under subsection (c)(2) of this section;

(2) criteria for making the findings required under such subsection with respect to petitions;

(3) a ranking system to assist in the identification of species that should receive priority review for listing; and

(4) a system for developing and implementing, on a priority basis, recovery plans under subsection (g) of this section. The Secretary shall provide to the public notice of, and opportunity to submit written comment on, any guideline (including any amendment thereto) proposed to be established under this subsection.

[§4(h)(1) through (4) added by PL 96-159]

(5) A final regulation adding a species to any list published pursuant to subsection (c) shall be published in the Federal Register not later than two years after the date of publication of notice of the regulation proposing such listing under paragraph (B)(i). If a final regulation is not adopted within such two-year period, the Secretary shall withdraw the proposed regulation and shall publish notice of such withdrawal in the Federal Register not later than 30 days after the end of such period. The Secretary shall not propose a regulation adding to such a list any species for which a proposed regulation has been withdrawn under this paragraph unless he determines that sufficient new information is available to warrant the proposal of a regulation. No proposed regulation for the listing of any species published before the date of the enactment of the Endangered Species Act Amendments of 1978 shall be withdrawn under this paragraph before the end of the one-year period beginning on such date of enactment.

[§4(f)(4) and (5) added by PL 95-632]

(g) Recovery Plans. - The Secretary shall develop and implement plans (hereinafter in this subsection referred to as 'recovery plans') for the conservation and survival of endangered species and threatened species listed pursuant to this section, unless he finds that such a plan will not promote the conservation of the species. Recovery plans may include, but are not limited to, experimental populations developed by experimental management technology which encompasses transplanting or translocating, artificial propagation and rearing, and any other innovative methodologies which will increase populations of endangered species and threatened species. The Secretary, in developing and implementing recovery plans, may procure the services of appropriate public and private agencies and institutions, and other qualified persons. Recovery teams appointed pursuant to this subsection shall not be subject to the Federal Advisory Committee Act.

(h) Agency Guidelines. — The Secretary shall establish, and publish in the Federal Register, agency guidelines to insure that the purposes of this section are achieved efficiently and effectively. Such guidelines shall include, but are not limited to —

(1) procedures for recording the receipt and the disposition of petitions submitted under subsection (c)(2) of this section;

(2) criteria for making the findings required under such subsection with respect to petitions;

(3) a ranking system to assist in the identification of species that should receive priority review for listing; and

(4) a system for developing and implementing, on a priority basis, recovery plans under subsection (g) of this section. The Secretary shall provide to the public notice of, and opportunity to submit written comment on, any guideline (including any amendment thereto) proposed to be established under this subsection.

[§4(h)(1) through (4) added by PL 96-159]

LAND ACQUISITION

SEC. 5(a) Program. — The Secretary, and the Secretary of Agriculture with respect to the National Forest System, shall establish and implement a program to conserve fish, wildlife, and plants, including those which are listed as endangered species or threatened species pursuant to section 4 of this Act. To carry out such a program, the appropriate Secretary—

(1) shall utilize the land acquisition and other authority under the Fish and Wildlife Act of 1956, as amended, the Fish and Wildlife Coordination Act, as amended, and the Migratory Bird Conservation Act, as appropriate; and

(2) is authorized to acquire by purchase, donation, or otherwise, lands, waters, or interest therein, and such authority shall be in addition to any other land acquisition authority vested in him.

(b) ACQUISITIONS. — Funds made available pursuant to the Land and Water Conservation Fund Act of 1965, as amended, may be used for the purpose of acquiring lands, waters, or interests therein under subsection (a) of this section.

LAND ACQUISITION

SEC. 5(a) Program. - The Secretary, and the Secretary of Agriculture with respect to the National Forest System, shall establish and implement a program to conserve ~~fish, wildlife, and plants, including~~ those ~~which are listed as~~ endangered species or threatened species listed pursuant to section 4 of this Act. To carry out such a program, the appropriate Secretary -

(1) shall utilize the land acquisition and other authority under the Fish and Wildlife Act of 1956, as amended, the Fish and Wildlife Coordination Act, as amended, and the Migratory Bird Conservation Act, as appropriate in acquiring designated critical habitats; and

(2) is authorized to ~~acquire by purchase, donation, or otherwise,~~ accept donations, gifts or other voluntary offerings of lands, waters, or interests therein, ~~and such authority shall be in addition to any other land acquisition authority vested in him.~~

(3) is authorized to acquire by purchase from willing sellers, lands, waters, or interests therein, which are within designated critical habitats, and such authority shall be in addition to any other land acquisition authority vested in him.

(b) ACQUISITIONS. - Funds made available pursuant to the Land and Water Conservation Fund Act of 1965, as amended, may be used for the purpose of acquiring lands, waters, or interests therein under subsection (a) of this section.

COOPERATION WITH THE STATES

SEC 6(a) GENERAL — In carrying out the program authorized by this Act, the Secretary shall cooperate to the maximum extent practicable with the States. Such cooperation shall include consultation with the States concerned before acquiring any land or water, or interest therein, for the purpose of conserving any endangered species or threatened species.

(b) MANAGEMENT AGREEMENTS — The Secretary may enter into agreements with any State for the administration and management of any area established for the conservation of endangered species or threatened species. Any revenues derived from the administration of such areas under these agreements shall be subject to the provisions of section 401 of the Act of June 15, 1935 (49 Stat. 383; 16 U.S.C. 715s).

(c) (1) COOPERATIVE AGREEMENTS — In furtherance of the purposes of this Act, the Secretary is authorized to enter into a cooperative agreement in accordance with this section with any State which establishes and maintains an adequate and active program for the conservation of endangered species and threatened species. Within one hundred and twenty days after the Secretary receives a certified copy of such a proposed State program, he shall make a determination whether such program is in accordance with this Act. Unless he determines, pursuant to this paragraph, that the State program is not in accordance with this Act, he shall enter into a cooperative agreement with the State for the purpose of assisting in implementation of the State program. In order for a State program to be deemed an adequate and active program for the conservation of endangered species and threatened species, the Secretary must find, and annually thereafter reconfirm such finding, that under the State program —

(A) authority resides in the State agency to conserve resident species of fish or wildlife determined by the State agency or the Secretary to be endangered or threatened.

(B) the State agency has established acceptable conservation programs, consistent with the purposes and policies of this Act, for all resident species of fish or wildlife in the State which are deemed by the Secretary to be endangered or threatened, and has furnished a copy of such plan and program together with all pertinent details, information, and data requested to the Secretary.

(C) the State agency is authorized to conduct investigations to determine the status and requirements for survival of resident species of fish and wildlife.

(D) the State agency is authorized to establish programs, including the acquisition of land or aquatic habitat or interests therein, for the conservation of resident endangered or threatened species of fish or wildlife and

(E) provision is made for public participation in designating resident species of fish or wildlife as endangered or threatened, or that under the State program —

(i) the requirements set forth in paragraphs (3), (4) and

(5) of this subsection are complied with, and

COOPERATION WITH THE STATES

SEC 6(a) GENERAL — In carrying out the program authorized by this Act, the Secretary shall cooperate to the maximum extent practicable with the States. Such cooperation shall include consultation with the States concerned before acquiring any land or water, or interest therein, for the purpose of conserving any endangered species or threatened species.

(b) MANAGEMENT AGREEMENTS — The Secretary may enter into agreements with any State for the administration and management of any area established for the conservation of endangered species or threatened species. Any revenues derived from the administration of such areas under these agreements shall be subject to the provisions of section 401 of the Act of June 15, 1935 (49 Stat. 383; 16 U.S.C. 715s).

Federal

(c)(1) In furtherance of the purposes of this Act, the Secretary is authorized to enter into a cooperative agreement with any state whose program for the conservation of endangered species and threatened species of fish, wildlife and plants meet the standards in (A)-(C) of this section. Within 120 days after the Secretary receives a certified copy of such a state program, he shall determine if it meets the standards below. If he determines the program meets these standards, he shall enter into a cooperative aggreement with the state for the purpose of assisting in implementation of the state program. A state program will be deemed to meet the standards if --

(a) Authority rests in a state agency to conserve species determined by the agency or the Secretary to be endangered or threatened;

(b) The state agency has a program for conserving those species which the agency or the Secretary have determined to be endangered of threatened and which the agency and the Secretary agree are most urgently in need of such a program;

(c) The state agency is authorized to undertake those activities associated with scientific resources management.

(ii) plants are included under which immediate atten-
tion will be given to those resident species of fish and
wildlife which are determined by the Secretary or the
State agency to be endangered or threatened and which
the Secretary and the State agency agree are most
urgently in need of conservation programs, except that a
cooperative agreement entered into with a State whose
program is deemed adequate and active pursuant to
clause (i) and this clause and this subparagraph shall not
affect the applicability of prohibitions set forth in or
authorized pursuant to section 4(d) or section 9(a)(1)
with respect to the taking of any resident endangered or
threatened species.

(2) In furtherance of the purposes of this Act, the
Secretary is authorized to enter into a cooperative agree-
ment in accordance with this section with any State
which establishes and maintains an adequate and active
program for the conservation of endangered species and
threatened species of plants. Within one hundred and
twenty days after the Secretary receives a certified copy
of such a proposed State program, he shall make a deter-
mination whether such program is in accordance with
this Act. Unless he determines, pursuant to this
paragraph, that the State program is not in accordance
with this Act, he shall enter into a cooperative agreement
with the State for the purpose of assisting in implementa-
tion of the State program. In order for a State program
to be deemed an adequate and active program for the
conservation of endangered species of plants and
threatened species of plants, the Secretary must find, and
annually thereafter reconfirm such finding, that under
the State program —

(A) authority resides in the State agency to conserve
resident species of plants determined by the State agency
or the Secretary to be endangered or threatened.

(B) the State agency has established acceptable conser-
vation programs, consistent with the purposes and
policies of this Act, for all resident species of plants in the
State which are deemed by the Secretary to be en-
dangered or threatened, and has furnished a copy of such
plan and program together with all pertinent details, in-
formation, and data requested to the Secretary;
(C) the State agency is authorized to conduct in-
vestigations to determine the status and requirements for
survival of resident species of plants, and
(D) provision is made for public participation in
designating resident species of plants as endangered or
threatened; or that under the State program —
(i) the requirements set forth in subparagraphs (C) and
(D) of this paragraph are complied with, and
(ii) plans are included under which immediate atten-
tion will be given to those resident species of plants which
are determined by the Secretary or the State agency to be
endangered or threatened and which the Secretary and
the State agency agree are most urgently in need of con-
servation programs, except that a cooperative agreement
entered into with a State whose program is deemed ade-
quate and active pursuant to clause (i) and this clause
shall not affect the applicability of prohibitions set forth
in or authorized pursuant to section 4(d) or section
9(a)(1) with respect to the taking of any resident en-
dangered or threatened species.
[(c) revised by PL 95-212, PL 95-632]
(d) ALLOCATION OF FUNDS — (1) The
Secretary is authorized to provide financial assistance to
any State, through its respective State agency, which has
entered into a cooperative agreement pursuant to subsec-
tion (c) of this section to assist in development of
programs for the conservation of endangered and
threatened species. The Secretary shall make an alloca-
tion of appropriated funds to such States based on con-
sideration of —

Where the Secretary determines that the state program is in accordance with this Act pursuant to paragraph 6(c)(1), the Secretary shall delegate all authority granted to him under this Act to the state over the regulation of endangered species or threatened species if that species is located entirely within the borders of that state (resident species).

(2) The applicability of prohibitions set forth in or authorized pursuant to section 4(d) or section 9(a)(1) or section 9(a)(2) shall not apply to those resident species covered by such a state program.

(d) ALLOCATION OF FUNDS — (1) The Secretary is authorized to provide financial assistance to any State, through its respective State agency, which has entered into a cooperative agreement pursuant to subsection (c) of this section to assist in development of programs for the conservation of endangered and threatened species. The Secretary shall make an allocation of appropriated funds to such States based on consideration of —

(A) the international commitments of the United States to protect endangered species or threatened species.

(B) the readiness of a State to proceed with a conservation program consistent with the objectives and purposes of this Act.

(C) the number of endangered species and threatened species within a State.

(D) the potential for restoring endangered species and threatened species within a State, and

(E) the relative urgency to initiate a program to restore and protect an endangered species or threatened species in terms of survival of the species.

So much of any appropriated funds allocated for obligation to any State for any fiscal year as remains unobligated at the close thereof is authorized to be made available to that State until the close of the succeeding fiscal year. Any amount allocated to any State which is unobligated at the end of the period during which it is available for expenditure is authorized to be made available for expenditure by the Secretary in conducting programs under this section.

(2) Such cooperative agreements shall provide for (A) the actions to be taken by the Secretary and the States, (B) the benefits that are expected to be derived in connection with the conservation of endangered or threatened species, (C) the estimated cost of these actions, and (D) the share of such costs to be borne by the Federal Government and by the States, except that —

(i) the Federal share of such program costs shall not exceed 66-2/3 per centum of the estimated program cost stated in the agreement, and

(ii) the Federal share may be increased to 75 per centum whenever two or more States having a common interest in one or more endangered or threatened species, the conservation of which may be enhanced by cooperation of such States, enter jointly into an agreement with the Secretary.

The Secretary may, in his discretion, and under such rules and regulations as he may prescribe, advance funds to the State for financing the United States pro rata share agreed upon in the cooperative agreement. For the purposes of this section, the non-Federal share may, in the discretion of the Secretary, be in the form of money or real property, the value of which will be determined by the Secretary, whose decision shall be final.

(e) REVIEW OF STATE PROGRAMS. — Any action taken by the Secretary under this section shall be subject to his periodic review at no greater than annual intervals.

(f) CONFLICTS BETWEEN FEDERAL AND STATE LAWS. — Any State law or regulation which applies with respect to the importation or exportation of, or interstate or foreign commerce in, endangered species or threatened species is void to the extent that it may effectively (1) permit what is prohibited by this Act or by any regulation which implements this Act, or (2) prohibit what is authorized pursuant to an exemption or permit provided for in this Act or in any regulation which implements this Act. This Act shall not otherwise be construed to void any State law or regulation which is intended to conserve migratory, resident, or introduced fish or wildlife, or to permit or prohibit sale of such fish or wildlife. Any State law or regulation respecting the taking of an endangered species or threatened species may be more restrictive than the exemptions or permits provided for in this Act or in any regulation which implements this Act but not less restrictive than the prohibitions so defined.

(A) the international commitments of the United States to protect endangered species or threatened species.

(B) the readiness of a State to proceed with a conservation program consistent with the objectives and purposes of this Act.

(C) the number of endangered species and threatened species within a State.

(D) the potential for and the desirability and economic feasibility of restoring endangered species and threatened species within a State; and

(E) the relative urgency to initiate a program to restore and protect an endangered species or threatened species in terms of survival of the species.

So much of any appropriated funds allocated for obligation to any State for any fiscal year as remains unobligated at the close thereof is authorized to be made available to that State until the close of the succeeding fiscal year. Any amount allocated to any State which is unobligated at the end of the period during which it is available for expenditure is authorized to be made available for expenditure by the Secretary in conducting programs under this section.

(2) Such cooperative agreements shall provide for (A) the actions to be taken by the Secretary and the States, (B) the benefits that are expected to be derived in connection with the conservation of endangered or threatened species, (C

(C) the estimated direct costs and the specific anticipated economic impacts of these actions; and

the share of such costs to be borne by the Federal Government and by the States, except that —

(i) the Federal share of such program costs shall not exceed 66-2/3 per centum of the estimated program cost stated in the agreement, and

(ii) the Federal share may be increased to 75 per centum whenever two or more States having a common interest in one or more endangered or threatened species, the conservation of which may be enhanced by cooperation of such States, enter jointly into an agreement with the Secretary.

The Secretary may, in his discretion, and under such rules and regulations as he may prescribe, advance funds to the State for financing the United States pro rata share agreed upon in the cooperative agreement. For the purposes of this section, the non-Federal share may, in the discretion of the Secretary, be in the form of money or real property, the value of which will be determined by the Secretary, whose decision shall be final.

(e) REVIEW OF STATE PROGRAMS. — Any action taken by the Secretary under this section shall be subject to his periodic review at no greater than annual intervals.

(f) CONFLICTS BETWEEN FEDERAL AND STATE LAWS. — Any State law or regulation which applies with respect to the importation or exportation of, or interstate or foreign commerce in, endangered species or threatened species is void to the extent that it may effectively (1) permit what is prohibited by this Act or by any regulation which implements this Act, or (2) prohibit what is authorized pursuant to an exemption or permit provided for in this Act or in any regulation which implements this Act. This Act shall not otherwise be construed to void any State law or regulation which is in-

(g) TRANSITION. — (1) For purposes of this subsection, the term "establishment period" means, with respect to any State, the period beginning on the date of enactment of this Act and ending on whichever of the following dates first occurs: (A) the date of the close of the 120-day period following the adjournment of the first regular session of the legislature of such State which commences after such date of enactment, or (B) the date of the close of the 15-month period following such date of enactment.

(2) The prohibitions set forth in or authorized pursuant to sections 4(d) and 9(a)(1)(B) of this Act shall not apply with respect to the taking of any resident endangered species or threatened species (other than species listed in Appendix I to the Convention or otherwise specifically covered by any other treaty or Federal law) within any State —

(A) which is then a party to a cooperative agreement with the Secretary pursuant to section 6(c) of this Act (except to the extent that the taking of any such species is contrary to the law of such State), or

(B) except for any time within the establishment period when —

(i) the Secretary applies such prohibition to such species at the request of the State, or

(ii) the Secretary applies such prohibition after he finds, and publishes his finding, that an emergency exists posing a significant risk to the well-being of such species and that the prohibition must be applied to protect such species. The Secretary's finding and publication may be made without regard to the public hearing or comment provisions of section 553 of title 5, United States Code, or any other provision of this Act; but such prohibition shall expire 90 days after the date of its imposition unless the Secretary further extends such prohibition by publishing notice and a statement of justification of such extension.

(h) REGULATIONS. — The Secretary is authorized to promulgate such regulations as may be appropriate to carry out the provisions of this section relating to financial assistance to States.

(i) Appropriations. — For the purposes of this section, there are authorized to be appropriated not to exceed the following sums:

(1) $10,000,000 through the period ending September 30, 1977.

(2) ~~$10,000,000~~ [illegible] for the period beginning October 1, 1977, and ending September 30, ~~1977~~ 1980.

[(i) amended by PL 95-212]

[illegible] October [illegible]

amended by P.L. 96-246, May 23, [illegible]

tended to conserve migratory, resident, or introduced fish or wildlife, or to permit or prohibit sale of such fish or wildlife. Any State law or regulation respecting the taking of an endangered species or threatened species may be more restrictive than the exemptions or permits provided for in this Act or in any regulation which implements this Act but not less restrictive than the prohibitions so defined.

(h) REGULATIONS. — The Secretary is authorized to promulgate such regulations as may be appropriate to carry out the provisions of this section relating to financial assistance to States.

(i) Appropriations. — For the purposes of this section, there are authorized to be appropriated not to exceed the following sums:

(1) $10,000,000 through the period ending September 30, 1977.

(2) ~~$10,000,000~~ [illegible] for the period beginning October 1, 1977, and ending September 30, ~~1977~~ 1980.

[(i) amended by PL 95-212]

[illegible] October [illegible]

amended by P.L. 96-246, May 23, [illegible]

INTERAGENCY COOPERATION

Sec. 7 (a) FEDERAL AGENCY ACTIONS AND CONSULTATIONS. — (1) The Secretary shall review other programs administered by him and utilize such programs in furtherance of the purposes of this Act. All other Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species listed pursuant to section 4 of this Act.

(2) Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with affected States, to be critical, unless such agency has been granted an exemption for such action by the Committee pursuant to subsection (h) of this section. In fulfilling the requirements of this paragraph each agency shall use the best scientific and commercial data available.

(3) Each Federal agency shall confer with the Secretary on any agency action which is likely to jeopardize the continued existence of any species proposed to be listed under section 4 or result in the destruction or adverse modification of critical habitat proposed to be designated for such species. This paragraph does not require a limitation on the commitment of resources as described in subsection (d).

[Sec. 7(a) amended by PL 96-159]

(b) Secretary's Opinion. — Consultation under subsection (a)(2) with respect to any agency action shall be concluded within 90 days after the date on which initiated or within such other period of time as is mutually agreeable to the Federal agency and the Secretary. Promptly after the conclusion of consultation, the Secretary shall provide to the Federal agency concerned a written statement setting forth the Secretary's opinion, and a summary of the information on which the opinion is based, detailing how the agency action affects the species or its critical habitat. The Secretary shall suggest those reasonable and prudent alternatives which he believes would not violate subsection (a)(2) and can be taken by the Federal agency or the permit or license applicant in implementing the agency action.

[(b) amended by PL 96-159]

7(a) Federal Agency Programs. - The Secretary shall, when appropriate, utilize programs administered by him in furtherance of the purposes of this Act. All other Federal agencies shall, to the extent practicable and consistent with their primary missions and mandates, integrate conservation of species listed pursuant to section 4 of this Act with their programs.

7(b) Federal Agency Actions.

"Each Federal agency shall, in consultation with and with the assistance of the Secretary, determine that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an 'agency action) is not likely to significantly jeopardize the continued existence of any endangered species or threatened species within their critical habitat or result in the destruction or significant adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with affected States, to be critical, unless either (i) mitigation and enhancement measures, including, but not limited to, live propagation, transplantation, and habitat acquisition, reasonably minimize the adverse effects of the agency action upon the endangered species, threatened species or critical habitat concerned, or (ii) the economic, cultural or environmental benefits of the agency action outweigh the biological, aesthetic, economic or cultural value of the endangered species or threatened species concerned. Such determination shall be made within 60 days after an agency action is proposed by a Federal agency, state or local government or private proponent."

(c) BIOLOGICAL ASSESSMENT. — (1) To facilitate compliance with the requirements of subsection (a)(2) each Federal agency shall, with respect to any agency action of such agency for which no contract for construction has been entered into and for which no construction has begun on the date of enactment of the Endangered Species Act Amendments of 1978, request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action. If the Secretary advises, based on the best scientific and commercial data available, that such species may be present, such agency shall conduct a biological assessment for the purpose of identifying any endangered species or threatened species which is likely to be affected by such action. Such assessment shall be completed within 180 days after the date on which initiated (or within such other period as is mutually agreed to by the Secretary and such agency) and, before any contract for construction is entered into and before construction is begun with respect to such action. Such assessment may be undertaken as part of a Federal agency's compliance with the requirements of section 102 of the National Environmental Policy Act of 1969 (42 U.S.C. 4332).

[(c) amended by PL 96-159]

(2) Any person who may wish to apply for an exemption under subsection (g) of this section for that action may conduct a biological assessment to identify any endangered species or threatened species which is likely to be affected by such action. Any such biological assessment must, however, be conducted in cooperation with the Secretary and under the supervision of the appropriate Federal agency.

[(2) added by PL 96-159]

(d) LIMITATION ON COMMITMENT OF RESOURCES. — After initiation of consultation required under subsection (a)(2), the Federal agency and the permit or license applicant shall not make any irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures which would not violate subsection (a)(2).

[(d) amended by PL 96-159]

(e)(1) ESTABLISHMENT OF COMMITTEE. — There is established a committee to be known as the Endangered Species Committee (hereinafter in this section referred to as the "Committee").

(2) The Committee shall review any application submitted to it pursuant to this section and determine in accordance with subsection (h) of this section whether or not to grant an exemption from the requirements of subsection (a)(2) of this section for the action set forth in such application.

[(2) amended by PL 96-159]

(3) The Committee shall be composed of seven members as follows:

(A) The Secretary of Agriculture.

(B) The Secretary of the Army.

(C) The Chairman of the Council of Economic Advisors.

(D) The Administrator of the Environmental Protection Agency.

(E) The Secretary of the Interior.

(F) The Administrator of the National Oceanic and Atmospheric Administration.

(G) The President, after consideration of any recommendations received pursuant to subsection (g)(2)(B) shall appoint one individual from each affected State, as determined by the Secretary, to be a member of the Committee for the consideration of the application for exemption for an agency action with respect to which such recommendations are made, not later than 30 days after an application is submitted pursuant to this section.

(4)(A) Members of the Committee shall receive no additional pay on account of their service on the Committee.

(B) While away from their homes or regular places of business in the performance of services for the Committee, members of the Committee shall be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as persons employed intermittently in the Government service are allowed expenses under section 5703 of title 5 of the United States Code.

(5)(A) Five members of the Committee or their representatives shall constitute a quorum for the transaction of any function of the Committee, except that, in no case shall any representative be considered in determining the existence of a quorum for the transaction of any function of the Committee if that function involves a vote by the Committee on any matter before the Committee.

(B) The Secretary of the Interior shall be the Chairman of the Committee.

(C) The Committee shall meet at the call of the Chairman or five of its members.

(D) All meetings and records of the Committee shall be open to the public.

(6) Upon request of the Committee, the head of any Federal agency is authorized to detail, on a nonreimbursable basis, any of the personnel of such agency to the Committee to assist it in carrying out its duties under this section.

(7)(A) The Committee may for the purpose of carrying out its duties under this section hold such hearings, sit and act at such times and places, take such testimony, and receive such evidence, as the Committee deems advisable.

(B) When so authorized by the Committee, any member or agent of the Committee may take any action which the Committee is authorized to take by this paragraph.

(C) Subject to the Privacy Act, the Committee may secure directly from any Federal agency information necessary to enable it to carry out its duties under this section. Upon request of the Chairman of the Committee, the head of such Federal agency shall furnish such information to the Committee.

(D) The Committee may use the United States mails in the same manner and upon the same conditions as a Federal agency.

(E) The Administrator of General Services shall provide to the Committee on a reimbursable basis such administrative support services as the Committee may request.

(8) In carrying out its duties under this section, the Committee may promulgate and amend such rules, regulations, and procedures, and issue and amend such orders as it deems necessary.

(9) For the purpose of obtaining information necessary for the consideration of an application for an exemption under this section the Committee may issue subpoenas for the attendance and testimony of witnesses and the production of relevant papers, books, and documents.

(10) Except in the case of a member designated pursuant to paragraph (3)(G) of this subsection, no member shall designate any person to serve as his or her representative unless that person is, at the time of such designation, holding a Federal office the appointment to which is subject to the advice and consent of the United States Senate. In no case shall any representative, including a representative of a member designated pursuant to paragraph (3)(G) of this subsection, be eligible to cast a vote on behalf of any member.

(f) REGULATIONS. — Not later than 90 days after the date of enactment of the Endangered Species Act Amendments of 1978, the Secretary shall promulgate regulations which set forth the form and manner in which applications for exemption shall be submitted to the Secretary and the information to be contained in such applications. Such regulations shall require that information submitted in an application by the head of any Federal agency with respect to any agency action include but not be limited to —

(1) a description of the consultation process carried out pursuant to subsection (a)(2) of this section between the head of the Federal agency and the Secretary, and

(2) a statement describing why such action cannot be altered or modified to conform with the requirements of subsection (a)(2) of this section.

[(1), (2) amended by PL 96-159]

(g) APPLICATION FOR EXEMPTION AND CONSIDERATION BY REVIEW BOARD. — (1) A Federal agency, the Governor of the State in which an agency action will occur, if any, or a permit or license applicant may apply to the Secretary for an exemption for an agency action of such agency if, after consultation under subsection (a)(2), the Secretary's opinion under subsection (b) indicates that the agency action would violate subsection (a)(2). An application for an exemption shall be considered initially by a review board in the manner provided in this subsection, and shall be considered by the Endangered Species Committee for a final determination under subsection (h) after a report is made by the review board. The applicant for an exemption shall be referred to as the "exemption applicant" in this section.

[(g) amended by PL 96-159]

(2) (A) An exemption applicant shall submit a written application to the Secretary, in a form prescribed under subsection (f) of this section, not later than 90 days after the completion of the consultation process; or, in the case of any agency action involving a permit or license applicant, not later than 90 days after the date on which the Federal agency concerned takes final agency action, for purposes of chapter 7 of title 5, United States Code, with respect to the issuance of the permit or license. Such application shall set forth the reasons why the exemption applicant considers that the agency action meets the requirements for an exemption under this subsection.

[(2)(A) amended by PL 96-159]

(B) Upon receipt of an application for exemption for an agency action under paragraph (1), the Secretary shall promptly notify the Governor of each affected State, if any, as determined by the Secretary, and request the Governors so notified to recommend individuals to be appointed to the review board to be established under paragraph (3) and to the Endangered Species Committee for consideration of such application.

(3)(A) A review board shall be established for purpose of considering an application for exemption and submitting a report to the Endangered Species Committee under this subsection as follows:

(i) One individual shall be appointed to the board by the Secretary not later than 15 days after an application is submitted pursuant to paragraph (2).

(ii) One individual shall be appointed to the board by the President, not later than 30 days after an application is submitted pursuant to paragraph (2) and after consideration of any recommendations received pursuant to pargraph (2) (B). An individual appointed by the President under this subparagraph shall be a resident of a State, if any, in which the agency action will be, or is being, carried out.

(iii) One administrative law judge shall be selected to serve on the board by the Civil Service Commission in the same manner as administrative law judges are selected under section 3344 of title 5 of the United States Code to be detailed to an agency which occasionally or temporarily is insufficiently staffed with administrative law judges. The use by the review board of such an administrative law judge shall be on a reimbursable basis.

(B) If biological opinions of both the Secretary of the Interior and the Secretary of Commerce indicate that an agency action would violate subsection (a)(2), such Secretaries shall jointly convene a review board to consider any application for exemption filed with respect to such agency action.

[(B) added by PL 96-159]

(C) Members of a review board who are full-time officers or employees of the United States shall receive no additional pay on account of their service on the board. All other members shall be entitled to receive an amount not to exceed the daily equivalent of the annual rate of basic pay in effect for grade GS-18 of the General Schedule for each day during which they are engaged in the actual performance of duties vested in the board. While away from their homes or regular places of business in the performance of services for a review board, members of the board shall be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as persons employed intermittently in the Government service are allowed expenses under section 5703 of title 5 of the United States Code.

[(C) amended by PL 96-159]

(4) The Secretary shall submit the application to the review board immediately after its appointment under paragraph (3), and the Secretary shall submit to the review board, in writing, his views and recommendations with respect to the application within 60 days after receiving a copy of any application under paragraph (2).

(5) It shall be the duty of a review board appointed under paragraph (3) to make a full review of the consultation carried out under subsection (a)(2) and within 60 days after its appointment or within such longer time as is mutually agreed upon between the exemption applicant and the Secretary, to make a determination, by a majority vote, (A) whether an irresolvable conflict exists and (B) whether the Federal Agency concerned and such exemption applicant has —

(i) carried out its consultation responsibilities as described in subsection (a) in good faith and made a reasonable and responsible effort to develop and fairly consider modifications or reasonable and prudent alternatives to the proposed agency action which would not violate subsection (a)(2);

(ii) conducted any biological assessment required of it by subsection (c); and

(iii) refrained from making any irreversible or irretrievable commitment of resources prohibited by subsection (d).

[(5) (i), (ii) (iii) amended by PL 96-159]

Any determination by the review board that an irresolvable conflict does not exist or that the Federal agency concerned or the exemption applicant has not met its respective requirements under subclause (i), (ii), (iii) shall be considered final agency action for purposes of chapter 7 of title 5 of the United States Code

[Amended by PL 96-159]

(6) If the review board determines that an irresolvable conflict exists and makes positive determinations under subclauses (i), (ii), and (iii) of paragraph (5) it shall proceed to prepare the report to be submitted under paragraph (7)

[(6) amended by PL 96-159]

(7) Within 180 days after making the determination under paragraph (6), the review board shall submit to the Committee a report discussing —

(A) the availability of reasonable and prudent alternatives to the agency action, and the nature and extent of the benefits of the agency action and of alternative courses of action consistent with conserving the species or the critical habitat;

(B) a summary of the evidence concerning whether or not the agency action is in the public interest and is of national or regional significance;

(C) appropriate reasonable mitigation and enhancement measures which should be considered by the Committee

(8) To the extent practicable within the time required for action under subsection (g) of this section, and except to the extent inconsistent with the requirements of this section, the consideration of any application for an exemption under this section and the conduct of any hearing under this subsection shall be in accordance with sections 554, 555, and 556 (other than subsection (b)(3) of section 556) of title 5, United States Code

(9) In carrying out its duties under this subsection, a review board may, and any member of a review board if so authorized by the review board, may —

(A) sit and act at such times and places, take such testimony, and receive such evidence, as the review board deems advisable;

(B) subject to the Privacy Act of 1974, request of any Federal agency or applicant information necessary to enable it to carry out such duties, and upon such request the head of such Federal agency shall furnish such information to the review board; and

(C) use the United States mails in the same manner and upon the same conditions as a Federal agency

(10) Upon request of a review board, the head of any Federal agency is authorized to detail, on a nonreimbursable basis, any of the personnel of such agency to the review board to assist it in carry out its duties under this section.

(11) The Administrator of the General Services Administration shall provide to a review board, on a reimbursable basis, such administrative support services as the review board may request

(12) All meetings and records of review boards shall be open to the public

(h) EXEMPTION — (1) The Committee shall make a final determination whether or not to grant an exemption within 90 days of receiving the report of the review board under subsection (g)(7). The Committee shall grant an exemption from the requirements of subsection (a)(2) for an agency action if, by a vote of not less than five of its members voting in person —

(A) it determines on the record, based on the report of the review board and on such other testimony or evidence as it may receive, that—

(i) there are no reasonable and prudent alternatives to the agency action;

(ii) the benefits of such action clearly outweigh the benefits of alternative courses of action consistent with conserving the species or its critical habitat, and such action is in the public interest, and

(iii) the action is of regional or national significance; and

(B) it establishes such reasonable mitigation and enhancement measures, including, but not limited to, live propagation, transplantation, and habitat acquisition and improvement, as are necessary and appropriate to minimize the adverse effects of the agency action upon the endangered species, threatened species, or critical habitat concerned.

Any final determination by Committee under this subsection shall be considered final agency action for purposes of chapter 7 of title 5 of the United States Code.

(2)(A) Except as provided in subparagraph (B), an exemption for an agency action granted under paragraph (1) shall constitute a permanent exemption with respect to all endangered or threatened species for the purposes of completing such agency action —

(i) regardless whether the species was identified in the biological assessment, and

(ii) only if a biological assessment has been conducted under subsection (c) with respect to such agency action.

(B) An exemption shall be permanent under subparagraph (A) unless —

(i) the Secretary finds, based on the best scientific and commercial data available, that such exemption would result in the extinction of a species that was not the subject of consultation under subsection (a)(2) or was not identified in any biological assessment conducted under subsection (c), and

(ii) the Committee determines within 60 days after the date of the Secretary's finding that the exemption should not be permanent.

If the Secretary makes a finding described in clause (i), the Committee shall meet with respect to the matter within 30 days after the date of the finding.

[(h)(2) amended by PL 96-159]

(i) REVIEW BY SECRETARY OF STATE. — Notwithstanding any other provision of this Act, the Committee shall be prohibited from considering for exemption any application made to it, if the Secretary of State, after a review of the proposed agency action and its potential implications, and after hearing, certifies, in writing, to the Committee within 60 days of any application made under this section that the granting of any such exemption and the carrying out of such action would be in violation of an international treaty obligation or other international obligation of the United States. The Secretary of State shall, at the time of such certification, publish a copy thereof in the Federal Register.

(j) Notwithstanding any other provision of this Act, the Committee shall grant an exemption for any agency action if the Secretary of Defense finds that such exemption is necessary for reasons of national security.

(k) SPECIAL PROVISIONS. — An exemption decision by the Committee under this section shall not be a major Federal action for purposes of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.)

Provided, That an environmental impact statement which discusses the impacts upon endangered species or threatened species or their critical habitats shall have been previously prepared with respect to any agency action exempted by such order.

(l) COMMITTEE ORDERS. — (1) If the Committee determines under subsection (h) that an exemption should be granted with respect to any agency action, the Committee shall issue an order granting the exemption and specifying the mitigation and enhancement measures established pursuant to subsection (h) which shall be carried out and paid for by the exemption applicant in implementing the agency action. All necessary mitigation and enhancement measures shall be authorized prior to the implementing of the agency action and funded concurrently with all other project features.

(2) The applicant receiving such exemption shall include the costs of such mitigation and enhancement measures within the overall costs of continuing the proposed action. Notwithstanding the preceding sentence the costs of such measures shall not be treated as project costs for the purpose of computing benefit-cost or other ratios for the proposed action. Any applicant may request the Secretary to carry out such mitigation and enhancement measures. The costs incurred by the Secretary in carrying out any such measures shall be paid by the applicant receiving the exemption. No later than one year after the granting of an exemption, the exemption applicant shall submit to the Council on Environmental Quality a report describing its compliance with the mitigation and enhancement measures prescribed by this section. Such report shall be submitted annually until all such mitigation and enhancement measures have been completed. Notice of the public availability of such reports shall be published in the Federal Register by the Council on Environmental Quality.

(m) NOTICE. — The 60-day notice requirement of section 11(g) of this Act shall not apply with respect to review of any final determination of the Committee under subsection (h) of this section granting an exemption from the requirements of subsection (a)(2) of this section.

[(m) amended by PL 96-159]

(n) JUDICIAL REVIEW. — Any person, as defined by section 3(13) of this Act, may obtain judicial review, under chapter 7 of title 5 of the United States Code, of any decision of the Endangered Species Committee under subsection (h) in the United States Court of Appeals for (1) any circuit wherein the agency action concerned will be, or is being, carried out, or (2) in any case in which the agency action will be, or is being, carried out outside of any circuit, the District of Columbia, by filing in such court within 90 days after the date of issuance of the decision, a written petition for review. A copy of such petition shall be transmitted by the clerk of the court to the Committee and the Committee shall file in the court the record in the proceeding, as provided in section 2112, of title 28, United States Code. Attorneys designated by the Endangered Species Committee may appear for, and represent the Committee in any action for review under this subsection.

(o) EXCEPTION ON TAKING. — Notwithstanding sections 4(d) and 9(a) of this Act or any regulations promulgated pursuant to such sections, any action for which an exemption is granted under subsection (h) of this section shall not be considered a taking of any endangered or threatened species with respect to any activity which is necessary to carry out such action.

(p) EXEMPTIONS IN PRESIDENTIALLY DECLARED DISASTER AREAS. — In any area which has been declared by the President to be a major disaster area under the Disaster Relief Act of 1974, the President is authorized to make the determinations required by subsections (g) and (h) of this section for any project for the repair or replacement of a public facility substantially as it existed prior to the disaster under section 401 or 402 of the Disaster Relief Act of 1974, and which the President determines (1) is necessary to prevent the recurrence of such a natural disaster and to reduce the potential loss of human life, and (2) to involve an emergency situation which does not allow the ordinary procedures of this section to be followed. Notwithstanding any other provision of this section, the Committee shall accept the determinations of the President under this subsection.

(q) AUTHORIZATION. — There are authorized to be appropriated to the Secretary to assist review boards and the Committee in carrying out their functions under subsections (e), (f), (g), and (h) of this section not to exceed $600,000 for each of fiscal years 1979, 1980, 1981, and 1982. The Chairman of the Committee shall report to the Congress before the end of fiscal year 1979 with respect to the adequacy of the budget authority contained in this subsection.

[(q) amended by PL 96-159]

[Sec. 7 revised by PL 95-632]

INTERNATIONAL COOPERATION

SEC. 8. (a) FINANCIAL ASSISTANCE. — As a demonstration of the commitment of the United States to the worldwide protection of endangered species and threatened species, the President may, subject to the provisions of section 1415 of the Supplemental Appropriation Act, 1953 (31 U.S.C. 724), use foreign currencies accruing to the United States Government under the Agricultural Trade Development and Assistance Act of 1954 or any other law to provide to any foreign country (with its consent) assistance in the development and management of programs in that country which the Secretary determines to be necessary or useful for the conservation of any endangered species or threatened species listed by the Secretary pursuant to section 4 of this Act. The President shall provide assistance (which includes, but is not limited to, the acquisition, by lease or otherwise, of lands, waters, or interests therein) to foreign countries under this section under such terms and conditions as he deems appropriate. Whenever foreign currencies are available for the provision of assistance under this section, such currencies shall be used in preference to funds appropriated under the authority of section 15 of this Act.

(b) ENCOURAGEMENT OF FOREIGN PROGRAMS. — In order to carry out further the provisions of this Act, the Secretary, through the Secretary of State, shall encourage —

(1) foreign countries to provide for the conservation of fish or wildlife and plants including endangered species and threatened species listed pursuant to section 4 of this Act;

(2) the entering into of bilateral or multilateral agreements with foreign countries to provide for such conservation; and

(3) foreign persons who directly or indirectly take fish or wildlife or plants in foreign countries or on the high seas for importation into the United States for commercial or other purposes to develop and carry out with such assistance as he may provide, conservation practices designed to enhance such fish or wildlife and their habitat.

[(b)(1), (3) amended by PL 96-159]

wildlife or plants; and

[(1) amended by PL 96-159]

(c) PERSONNEL. — After consultation with the Secretary of State, the Secretary may —

(1) assign or otherwise make available any officer or employee of his department for the purpose of cooperating with foreign countries and international organizations in developing personnel resources and programs which promote the conservation of fish or wildlife or plants; and

[(1) amended by PL 96-159]

(2) conduct or provide financial assistance for the educational training of foreign personnel, in this country or abroad, in fish, wildlife, or plant management, research and law enforcement and to render professional assistance abroad in such matters.

(d) INVESTIGATIONS. — After consultation with the Secretary of State and the Secretary of the Treasury, as appropriate, the Secretary may conduct or cause to be conducted such law enforcement investigations and research abroad as he deems necessary to carry out the purposes of this Act.

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[(1) amended by PL 96-159]

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Sec. 8A (a) MANAGEMENT AUTHORITY AND SCIENTIFIC AUTHORITY. — The Secretary of the Interior (hereinafter in this section referred to as the "Secretary") is designated as the Management Authority and the Scientific Authority for purposes of the Convention and the respective functions of each such Authority shall be carried out through the United States Fish and Wildlife Service.

(b) MANAGEMENT AUTHORITY FUNCTIONS. — The Secretary shall do all things necessary and appropriate to carry out the functions of the Management Authority under the Convention.

(c) SCIENTIFIC AUTHORITY FUNCTIONS. — The Secretary shall do all things necessary and appropriate to carry out the functions of the Scientific Authority under the Convention.

(d) INTERNATIONAL CONVENTION ADVISORY COMMISSION. — (1) There is hereby established the International Convention Advisory Commission (hereinafter in this section referred to as the "Commission").

(2) The Commission shall be composed of the following members:

(A) One member appointed by each of the following Federal officers from his respective agency:

(i) The Secretary.

(ii) The Secretary of Agriculture.

(iii) The Secretary of Commerce.

(iv) The Director of the National Science Foundation.

(v) The Chairman of the Council on Environmental Quality.

(B) One member appointed by the Secretary from among officers and employees of the State agencies having fish and wildlife conservation and management responsibilities.

(C) The Secretary of the Smithsonian Institution is invited to appoint a member.

(3)(A) Individuals who are appointed as members of the Commission under paragraph (2) must be scientifically qualified.

(B) The term of office of a member of the Commission appointed under paragraph (2)(B) is two years and an individual may be appointed under such paragraph for any number of terms, except that an individual may not be appointed under that paragraph for a term that would be a third consecutive term for that individual under that paragraph.

(C) While away from his home or regular place of business in the performance of services for the Commission, a member appointed under paragraph (2)(B) or (C) shall be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as the expenses authorized by section 5703(b) of title 5, United States Code, for persons in the Government service employed intermittently.

(D) Members of the Commission who are full-time officers or employees of the United States shall receive no additional compensation on account of their service on the Commission.

(4)(A) The Commission shall elect a chairman from among its members. The term of office of the chairman is one year.

(B) No recommendation referred to in paragraph (5) shall be deemed to be a recommendation of the Commission unless a majority of the members of the Commission vote for that recommendation.

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(B) No recommendation referred to in paragraph (5) shall be deemed to be a recommendation of the Commission unless a majority of the members of the Commission vote for that recommendation.

(5) The Commission shall make recommendations to the Secretary or his designee on all matters pertaining to the responsibilities of the Scientific Authority under the terms of the Convention. The Commission shall include with any such recommendation any written dissenting view made by any member.

(6) In the discharge of its responsibilities, the Commission shall, to the extent practicable, ascertain the views of, and utilize the expertise of, the governmental and nongovernmental scientific communities, State agencies responsible for the conservation of wild fauna or flora, humane groups, zoological and botanical institutions, recreational and commercial interests, the conservation community, and others as appropriate.

(7) In any case in which the Scientific Authority decides not to accept a recommendation made by the Commission under paragraph (5), the Scientific Authority shall provide to the Commission a written explanation of the reasons for that decision and shall publish the explanation in the Federal Register.

(8)(A) The Chairman of the Commission, with the concurrence of the Commission, shall appoint an Executive Secretary for the Commission. The Executive Secretary shall carry out such duties and functions as shall be prescribed by the Commission, shall be appointed subject to the provisions of title 5, United States Code, governing appointments in the competitive service, and shall be paid in accordance with the provisions of chapter 51 and subchapter III of chapter 53 of such title relating to classification and General Schedule pay rates.

(B) The Secretary shall provide the necessary staff and administrative support for the Commission.

(c) WILDLIFE PRESERVATION IN WESTERN HEMISPHERE. — The President shall designate those agencies of the Federal Government that shall act on behalf of, and represent, the United States in all regards as required by the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere.

[Sec. 8A added by PL 96-159]

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(7) In any case in which the Scientific Authority decides not to accept a recommendation made by the Commission under paragraph (5), whether for environmental, economic, political or other reasons, the Scientific Authority shall provide the Commission a written explanation of the reasons for that decision.

(8)(A) The Chairman of the Commission, with the concurrence of the Commission, shall appoint an Executive Secretary for the Commission. The Executive Secretary shall carry out such duties and functions as shall be prescribed by the Commission, shall be appointed subject to the provisions of title 5, United States Code, governing appointments in the competitive service, and shall be paid in accordance with the provisions of chapter 51 and subchapter III of chapter 53 of such title relating to classification and General Schedule pay rates.

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PROHIBITED ACTS

SEC 9 (a) GENERAL — (1) Except as provided in sections 6(g)(2) and 10 of this Act, with respect to any endangered species of fish or wildlife listed pursuant to section 4 of this Act it is unlawful for any person subject to the jurisdiction of the United States to —

(A) import any such species into, or export any such species from the United States.

(B) take any such species within the United States or the territorial sea of the United States,

(C) take any such species upon the high seas,

(D) possess, sell, deliver, carry, transport, or ship, by any means whatsoever, any such species taken in violation of subparagraphs (B) and (C);

(E) deliver, receive, carry, transport, or ship in interstate or foreign commerce, by any means whatsoever and in the course of a commercial activity, any such species,

(F) sell or offer for sale in interstate or foreign commerce any such species, or

(G) violate any regulation pertaining to such species or to any threatened species of fish or wildlife listed pursuant to section 4 of this Act and promulgated by the Secretary pursuant to authority provided by this Act

(2) Except as provided in sections 6(g)(2) and 10 of this Act, with respect to any endangered species of plants listed pursuant to section 4 of this Act, it is unlawful for any person subject to the jurisdiction of the United States to —

(A) import any such species into, or export any such species from, the United States.

(B) deliver, receive, carry, transport, or ship in interstate or foreign commerce, by any means whatsoever and in the course of a commercial activity, any such species,

(C) sell or offer for sale in interstate or foreign commerce any such species, or

(D) violate any regulation pertaining to such species or to any threatened species of plants listed pursuant to section 4 of this Act and promulgated by the Secretary pursuant to authority provided by this Act

(b)(1) SPECIES HELD IN CAPTIVITY OR CONTROLLED ENVIRONMENT — The provisions of this section shall not apply to any fish or wildlife held in captivity or in a controlled environment on the effective date of this Act if the purposes of such holding are not contrary to the purposes of this Act, except that this subsection shall not apply in the case of any fish or wildlife held in the course of a commercial activity. With respect to any act prohibited by this section which occurs after a period of 180 days from the effective date of this Act, there shall be a rebuttable presumption that the fish or wildlife involved in such act was not held in captivity or in a controlled environment on such effective date

(2)(A) This section shall not apply to—

(i) any raptor legally held in captivity or in a controlled environment on the effective date of the Endangered Species Act Amendments of 1978, or

(ii) any progeny of any raptor described in clause (i) until such time as any such raptor or progeny is intentionally returned to a wild state

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SEC 9 (a) GENERAL — (1) Except as provided in sections 6(g)(2) and 10 of this Act, with respect to any endangered species of fish or wildlife listed pursuant to section 4 of this Act it is unlawful for any person subject to the jurisdiction of the United States to —

(A) import any such species into, or export any such species from the United States.

(B) take any such species within the United States or the territorial sea of the United States,

(C) take any such species upon the high seas,

(D) possess, sell, deliver, carry, transport, or ship, by any means whatsoever, any such species taken in violation of subparagraphs (B) and (C),

(E) deliver, receive, carry, transport, or ship in interstate or foreign commerce, by any means whatsoever and in the course of a commercial activity, any such species,

(F) sell or offer for sale in interstate or foreign commerce any such species, or

(G) violate any regulation pertaining to such species or to any threatened species of fish or wildlife listed pursuant to section 4 of this Act and promulgated by the Secretary pursuant to authority provided by this Act

(2) Except as provided in sections 6(g)(2) and 10 of this Act, with respect to any endangered species of plants listed pursuant to section 4 of this Act, it is unlawful for any person subject to the jurisdiction of the United States to —

(A) import any such species into, or export any such species from, the United States.

(B) deliver, receive, carry, transport, or ship in interstate or foreign commerce, by any means whatsoever and in the course of a commercial activity, any such species,

(C) sell or offer for sale in interstate or foreign commerce any such species, or

(D) violate any regulation pertaining to such species or to any threatened species of plants listed pursuant to section 4 of this Act and promulgated by the Secretary pursuant to authority provided by this Act

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(B) Any person holding any raptor or progeny described in subparagraph (A) must be able to demonstrate that the raptor or progeny does, in fact, qualify under the provisions of this paragraph, and shall maintain and submit to the Secretary, on request, such inventories, documentation, and records as the Secretary may by regulation require as being reasonably appropriate to carry out the purposes of this paragraph. Such requirements shall not unnecessarily duplicate the requirements of other rules and regulations promulgated by the Secretary.

[(2) added by PL 95-632]

(c) VIOLATION OF CONVENTION. — (1) It is unlawful for any person subject to the jurisdiction of the United States to engage in any trade in any specimens contrary to the provisions of the Convention, or to possess any specimens traded contrary to the provisions of the Convention, including the definitions of terms in article I thereof.

(2) Any importation into the United States of fish or wildlife shall, if —

(A) such fish or wildlife is not an endangered species listed pursuant to section 4 of this Act but is listed in Appendix II of the Convention,

(B) the taking and exportation of such fish or wildlife is not contrary to the provisions of the Convention and all other applicable requirements of the Convention have been satisfied,

(C) the applicable requirements of subsections (d), (e), and (f) of this section have been satisfied, and

(D) such importation is not made in the course of a commercial activity, be presumed to be an importation not in violation of any provision of this Act or any regulation issued pursuant to this Act.

(d) IMPORTS AND EXPORTS. — (1) It is unlawful for any person to engage in business as an importer or exporter of fish or wildlife (other than shellfish and fishery products which (A) are not listed pursuant to section 4 of this Act as endangered species or threatened species, and (B) are imported for purposes of human or animal consumption or taken in waters under the jurisdiction of the United States or on the high seas for recreational purposes) or plants without first having obtained permission from the Secretary.

(2) Any person required to obtain permission under paragraph (1) of this subsection shall —

(A) keep such records as will fully and correctly disclose each importation or exportation of fish, wildlife, or plants made by him and the subsequent disposition made by him with respect to such fish, wildlife, or plants;

(B) at all reasonable times upon notice by a duly authorized representative of the Secretary, afford such representative access to his places of business, an opportunity to examine his inventory of imported fish, wildlife, or plants and the records required to be kept under subparagraph (A) of this paragraph, and to copy such records; and

(C) file such reports as the Secretary may require.

(3) The Secretary shall prescribe such regulations as are necessary and appropriate to carry out the purposes of this subsection.

(e) REPORTS. — It is unlawful for any person importing or exporting fish or wildlife (other than shellfish and fishery products which (1) are not listed pursuant to section 4 of this Act as endangered or threatened species, and (2) are imported for purposes of human or animal consumption or taken in waters under the jurisdiction of the United States or on the high seas for recreational purposes) or plants to fail to file any declaration or report as the Secretary deems necessary to facilitate enforcement of this Act or to meet the obligations of the Convention.

(B) Any person holding any raptor or progeny described in subparagraph (A) must be able to demonstrate that the raptor or progeny does, in fact, qualify under the provisions of this paragraph, and shall maintain and submit to the Secretary, on request, such inventories, documentation, and records as the Secretary may by regulation require as being reasonably appropriate to carry out the purposes of this paragraph. Such requirements shall not unnecessarily duplicate the requirements of other rules and regulations promulgated by the Secretary.

[(2) added by PL 95-632]

(c) VIOLATION OF CONVENTION. — (1) It is unlawful for any person subject to the jurisdiction of the United States to engage in any trade in any specimens contrary to the provisions of the Convention, or to possess any specimens traded contrary to the provisions of the Convention, including the definitions of terms in article I thereof

provided that possession of specimens acquired before ratification of the convention or before placement on an appropriate Appendix to the Convention, whichever is later, is not prohibited."

(d) IMPORTS AND EXPORTS. — (1) It is unlawful for any person to engage in business as an importer or exporter of fish or wildlife (other than shellfish and fishery products which (A) are not listed pursuant to section 4 of this Act as endangered species or threatened species, and (B) are imported for purposes of human or animal consumption or taken in waters under the jurisdiction of the United States or on the high seas for recreational purposes) or plants without first having obtained permission from the Secretary.

(2) Any person required to obtain permission under paragraph (1) of this subsection shall —

(A) keep such records as will fully and correctly disclose each importation or exportation of fish, wildlife, or plants made by him and the subsequent disposition made by him with respect to such fish, wildlife, or plants;

(B) at all reasonable times upon notice by a duly authorized representative of the Secretary, afford such representative access to his places of business, an opportunity to examine his inventory of imported fish, wildlife, or plants and the records required to be kept under subparagraph (A) of this paragraph, and to copy such records; and

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(f) DESIGNATION OF PORTS.—(1) It is unlawful for any person subject to the jurisdiction of the United States to import into or export from the United States any fish or wildlife (other than shellfish and fishery products which (A) are not listed pursuant to section 4 of this Act as endangered species or threatened species, and (B) are imported for purposes of human or animal consumption or taken in waters under the jurisdiction of the United States or on the high seas for recreational purposes) or plants, except at a port or ports designated by the Secretary of the Interior. For the purposes of facilitating enforcement of this Act and reducing the costs thereof, the Secretary of the Interior, with approval of the Secretary of the Treasury and after notice and opportunity for public hearing, may, by regulation, designate ports and change such designations. The Secretary of the Interior, under such terms and conditions as he may prescribe, may permit the importation or exportation at nondesignated ports in the interest of the health or safety of the fish or wildlife or plants, or for other reasons if, in his discretion, he deems it appropriate and consistent with the purpose of this subsection.

(2) Any port designated by the Secretary of the Interior under the authority of section 4(d) of the Act of December 5, 1969 (16 U.S.C. 668cc-4(d)), shall, if such designation is in effect on the day before the date of the enactment of this Act, be deemed to be a port designated by the Secretary under paragraph (1) of this subsection until such time as the Secretary otherwise provides.

(g) VIOLATIONS.—It is unlawful for any person subject to the jurisdiction of the United States to attempt to commit, solicit another to commit, or cause to be committed, any offense defined in this section.

(f) DESIGNATION OF PORTS.—(1) It is unlawful for any person subject to the jurisdiction of the United States to import into or export from the United States any fish or wildlife (other than shellfish and fishery products which (A) are not listed pursuant to section 4 of this Act as endangered species or threatened species, and (B) are imported for purposes of human or animal consumption or taken in waters under the jurisdiction of the United States or on the high seas for recreational purposes) or plants, except at a port or ports designated by the Secretary of the Interior. For the purposes of facilitating enforcement of this Act and reducing the costs thereof, the Secretary of the Interior, with approval of the Secretary of the Treasury and after notice and opportunity for public hearing, may, by regulation, designate ports and change such designations. The Secretary of the Interior, under such terms and conditions as he may prescribe, may permit the importation or exportation at nondesignated ports in the interest of the health or safety of the fish or wildlife or plants, or for other reasons if, in his discretion, he deems it appropriate and consistent with the purpose of this subsection.

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(g) VIOLATIONS.—It is unlawful for any person subject to the jurisdiction of the United States to attempt to commit, solicit another to commit, or cause to be committed, any offense defined in this section.

EXCEPTIONS

SEC. 10 (a) PERMITS — The Secretary may permit, under such terms and conditions as he may prescribe, any act otherwise prohibited by section 9 of this Act for scientific purposes or to enhance the propagation or survival of the affected species.

(b) HARDSHIP EXEMPTIONS — (1) If any person enters into a contract with respect to a species of fish or wildlife or plant before the date of the publication in the Federal Register of notice of consideration of that species as an endangered species and the subsequent listing of that species as an endangered species pursuant to section 4 of this Act will cause undue economic hardship to such person under the contract, the Secretary, in order to minimize such hardship, may exempt such person from the application of section 9(a) of this Act to the extent the Secretary deems appropriate if such person applies to him for such exemption and includes with such application such information as the Secretary may require to prove such hardship, except that (A) no such exemption shall be for a duration of more than one year from the date of publication in the Federal Register of notice of consideration of the species concerned, or shall apply to a quantity of fish or wildlife or plants in excess of that specified by the Secretary, (B) the one-year period for those species of fish or wildlife listed by the Secretary as endangered prior to the effective date of this Act shall expire in accordance with the terms of section 3 of the Act of December 5, 1969 (83 Stat. 275), and (C) no such exemption may be granted for the importation or exportation of a specimen listed in Appendix I of the Convention which is to be used in a commercial activity.

(2) As used in this subsection, the term "undue economic hardship" shall include, but not be limited to:

(A) substantial economic loss resulting from inability caused by this Act to perform contracts with respect to species of fish and wildlife entered into prior to the date of publication in the Federal Register of a notice of consideration of such species as an endangered species.

(B) substantial economic loss to persons who, for the year prior to the notice of consideration of such species as an endangered species, derived a substantial portion of their income from the lawful taking of any listed species, which taking would be made unlawful under this Act, or

(C) curtailment of subsistence taking made unlawful under this Act by persons (i) not reasonably able to secure other sources of subsistence, and (ii) dependent to a substantial extent upon hunting and fishing for subsistence, and (iii) who must engage in such curtailed taking for subsistence purposes.

[illegible] requirements for a showing of undue economic hardship as he deems fit. Exceptions granted under this section may be limited by the Secretary in his discretion as to time, area, or other factor of applicability.

(c) NOTICE AND REVIEW — The Secretary shall publish notice in the Federal Register of each application for an exemption or permit which is made under this section. Each notice shall invite the submission from interested parties, within thirty days after the date of the notice, written data, views, or arguments with respect to the application, except that such thirty-day period may be waived by the Secretary in an emergency situation where the health or life of an endangered animal is threatened and no reasonable alternative is available to the applicant, but notice of any such waiver shall be published by the Secretary in the Federal Register within ten days following the issuance of the exemption or permit. Information received by the Secretary as part of any application shall be available to the public as a matter of public record at every stage of the proceeding.

EXCEPTIONS

SEC. 10. (a) PERMITS. - The Secretary may permit, under such terms and conditions as he may prescribe, any act otherwise prohibited by section 9 of this Act for scientific and experimental purposes or to enhance the propagation or survival of the affected species.

Such permits may be issued for, but not limited to, activities such as transplantation, artificial propagation and release and other experimental operations associated with approved plans to mitigate the adverse affects of the agency action on endangered species and threatened species pursuant to this Act.

(b) HARDSHIP EXEMPTIONS — (1) If any person enters into a contract with respect to a species of fish or wildlife or plant before the date of the publication in the Federal Register of ~~notice of consideration~~ of that species as an endangered species and the subsequent listing of that species as an endangered species pursuant to section 4 of this Act will cause undue economic hardship to such person under the contract, the Secretary, in order to minimize such hardship, may exempt such person from the application of section 9(a) of this Act to the extent the Secretary deems appropriate if such person applies to him for such exemption and includes with such application such information as the Secretary may require to prove such hardship, except that (A) no such exemption shall be for a duration of more than one year from the date of publication in the Federal Register of ~~notice of consideration~~ of the species concerned, or shall apply to a quantity of fish or wildlife or plants in excess of that specified by the Secretary, (B) the one-year period for those species of fish or wildlife listed by the Secretary as endangered prior to the effective date of this Act shall expire in accordance with the terms of section 3 of the Act of December 5, 1969 (83 Stat. 275), and (C) no such exemption may be granted for the importation or exportation of a specimen listed in Appendix I of the Convention which is to be used in a commercial activity.

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a proposal to list

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a proposal TO list

(C) curtailment of subsistence taking made unlawful under this Act by persons (i) not reasonably able to secure other sources of subsistence, and (ii) dependent to a substantial extent upon hunting and fishing for subsistence, and (iii) who must engage in such curtailed taking for subsistence purposes.

(3) The Secretary may make further requirements for a showing of undue economic hardship as he deems fit. Exceptions granted under this section may be limited by the Secretary in his discretion as to time, area, or other factor of applicability.

(c) NOTICE AND REVIEW. — The Secretary shall publish notice in the Federal Register of each application for an exemption or permit which is made under this section. Each notice shall invite the submission from interested parties, within thirty days after the date of the notice, written data, views, or arguments with respect to the application; except that such thirty-day period may be waived by the Secretary in an emergency situation where the health or life of an endangered animal is threatened and no reasonable alternative is available to the applicant, but notice of any such waiver shall be published by the Secretary in the Federal Register within ten days following the issuance of the exemption or permit. Information received by the Secretary as part of any application shall be available to the public as a matter of public record at every stage of the proceeding.

(d) PERMIT AND EXEMPTION POLICY. — The Secretary may grant exceptions under subsections (a) and (b) of this section only if he finds and publishes his finding in the Federal Register that (1) such exceptions were applied for in good faith, (2) if granted and exercised will not operate to the disadvantage of such endangered species, and (3) will be consistent with the purposes and policy set forth in section 2 of this Act.

(e) ALASKA NATIVES. — (1) Except as provided in paragraph (4) of this subsection the provisions of this Act shall not apply with respect to the taking of any endangered species or threatened species, or the importation of any such species taken pursuant to this section, by —

(A) any Indian, Aleut, or Eskimo who is an Alaskan Native who resides in Alaska; or

(B) any non-native permanent resident of an Alaskan native village; if such taking is primarily for subsistence purposes. Non-edible byproducts of species taken pursuant to this section may be sold in interstate commerce when made into authentic native articles of handicrafts and clothing; except that the provisions of this subsection shall not apply to any non-native resident of an Alaskan native village found by the Secretary to be not primarily dependent upon the taking of fish and wildlife for consumption or for the creation and sale of authentic native articles of handicrafts and clothing.

(2) Any taking under this subsection may not be accomplished in a wasteful manner.

(3) As used in this subsection —

(i) The term "subsistence" includes selling any edible portion of fish or wildlife in native villages and towns in Alaska for native consumption within native villages or towns; and

(ii) The term "authentic native articles of handicrafts and clothing" means items composed wholly or in some significant respect of natural materials, and which are produced, decorated or fashioned in the exercise of traditional native handicrafts without the use of pantographs, multiple carvers, or other mass copying devices. Traditional native handicrafts include, but are not limited to, weaving, carving, stitching, sewing, lacing, beading, drawing, and painting.

(4) Notwithstanding the provisions of paragraph (1) of this subsection, whenever the Secretary determines that any species of fish or wildlife which is subject to taking under the provisions of this subsection is an endangered species or threatened species, and that such taking materially and negatively affects the threatened or endangered species, he may prescribe regulations upon the taking of such species by any such Indian, Aleut, Eskimo, or non-native Alaskan resident of an Alaskan native village. Such regulations may be established with reference to species, geographical description of the area included, the season for taking, or any other factors related to the reason for establishing such regulations and

(d) PERMIT AND EXEMPTION POLICY. — The Secretary may grant exceptions under subsections (a) and (b) of this section only if he finds and publishes his finding in the Federal Register that (1) such exceptions were applied for in good faith, (2) if granted and exercised will not operate to the disadvantage of such endangered species, and (3) will be consistent with the purposes and policy set forth in section 2 of this Act.

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consistent with the policy of this Act. Such regulations shall be prescribed after a notice and hearings in the affected judicial districts of Alaska and as otherwise required by section 103 of the Marine Mammal Protection Act of 1972, and shall be removed as soon as the Secretary determines that the need for their impositions has disappeared.

(f)(1) As used in this subsection —

(A) The term "pre-Act endangered species part" means —

(i) any sperm whale oil, including derivatives thereof, which was lawfully held within the United States on December 28, 1973, in the course of a commercial activity; or

(ii) any finished scrimshaw product, if such product or the raw material for such product was lawfully held within the United States on December 28, 1973, in the course of a commercial activity.

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(i) any sperm whale oil, including derivatives thereof, which was lawfully held within the United States on December 28, 1973, in the course of a commercial activity; or

(ii) any finished scrimshaw product, if such product or the raw material for such product was lawfully held within the United States on December 28, 1973, in the course of a commercial activity.

(B) The term "scrimshaw product" means any art form which involves the etching or engraving of designs upon, or the carving of figures, patterns, or designs from, any bone or tooth of any marine mammal of the order Cetacea.

(2) The Secretary, pursuant to the provisions of this subsection, may exempt, if such exemption is not in violation of the Convention, any pre-Act endangered species part from one or more of the following prohibitions:

(A) The prohibition on exportation from the United States set forth in section 9(a)(1)(A) of this Act.

(B) Any prohibition set forth in section 9(a)(1)(E) or (F) of this Act.

(3) Any person seeking an exemption described in paragraph (2) of this subsection shall make application therefor to the Secretary in such form and manner as he shall prescribe, but no such application may be considered by the Secretary unless the application—

(A) is received by the Secretary before the close of the one-year period beginning on the date on which regulations promulgated by the Secretary to carry out this subsection first take effect;

(B) contains a complete and detailed inventory of all pre-Act endangered species parts for which the applicant seeks exemption;

(C) is accompanied by such documentation as the Secretary may require to prove that any endangered species part or product claimed by the applicant to be a pre-Act endangered species part is in fact such a part; and

(D) contains such other information as the Secretary deems necessary and appropriate to carry out the purposes of this subsection.

(4) If the Secretary approves any application for exemption made under this subsection, he shall issue to the applicant a certificate of exemption which shall specify—

(A) any prohibition in section 9(a) of this Act which is exempted;

(B) the pre-Act endangered species parts to which the exemption applies;

(C) the period of time during which the exemption is in effect, but no exemption made under this subsection shall have force and effect after the close of the three-year period beginning on the date of issuance of the certificate unless such exemption is renewed under paragraph (8); and

(8)(A) Any person to whom a certificate of exemption has been issued under paragraph (4) of this subsection may apply to the Secretary for a renewal of such exemption for a period not to exceed three years beginning on the expiration date of such certificate. Such application shall be made in the same manner as the application for exemption was made under paragraph (3), but without regard to subparagraph (A) of such paragraph.

(B) The term "scrimshaw product" means any art form which involves the etching or engraving of designs upon, or the carving of figures, patterns, or designs from, any bone or tooth of any marine mammal of the order Cetacea.

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(A) is received by the Secretary before the close of the one-year period beginning on the date on which regulations promulgated by the Secretary to carry out this subsection first take effect;

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(C) is accompanied by such documentation as the Secretary may require to prove that any endangered species part or product claimed by the applicant to be a pre-Act endangered species part is in fact such a part; and

(D) contains such other information as the Secretary deems necessary and appropriate to carry out the purposes of this subsection.

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(B) the pre-Act endangered species parts to which the exemption applies;

(C) the period of time during which the exemption is in effect, but no exemption made under this subsection shall have force and effect after the close of the three-year period beginning on the date of issuance of the certificate unless such exemption is renewed under paragraph (8); and

(8)(A) Any person to whom a certificate of exemption has been issued under paragraph (4) of this subsection may apply to the Secretary for a renewal of such exemption for a period not to exceed three years beginning on the expiration date of such certificate. Such application shall be made in the same manner as the application for exemption was made under paragraph (3), but without regard to subparagraph (A) of such paragraph.

(B) If the Secretary approves any application for renewal of an exemption under this paragraph, he shall issue to the applicant a certificate of renewal of such exemption which shall provide that all terms, conditions, prohibitions, and other regulations made applicable by the original certificate shall remain in effect during the period of the renewal.

(C) No exemption or renewal of such exemption made under this subsection shall have force and effect after the expiration date of the certificate of renewal of such exemption issued under this paragraph.

[(8)(A), (B), (C) added by PL 96-159]

(B) If the Secretary approves any application for renewal of an exemption under this paragraph, he shall issue to the applicant a certificate of renewal of such exemption which shall provide that all terms, conditions, prohibitions, and other regulations made applicable by the original certificate shall remain in effect during the period of the renewal.

(C) No exemption or renewal of such exemption made under this subsection shall have force and effect after the expiration date of the certificate of renewal of such exemption issued under this paragraph.

[(4)(A), (B), (C) added by PL 96-159]

(D) any term or condition prescribed pursuant to paragraph (5)(A) or (B), or both, which the Secretary deems necessary or appropriate.

(5) The Secretary shall prescribe such regulations as he deems necessary and appropriate to carry out the purposes of this subsection. Such regulations may set forth—

(A) terms and conditions which may be imposed on applicants for exemptions under this subsection (including, but not limited to, requirements that applicants register inventories, keep complete sales records, permit duly authorized agents of the Secretary to inspect such inventories and records, and periodically file appropriate reports with the Secretary); and

(B) terms and conditions which may be imposed on any subsequent purchaser of any pre-Act endangered species part covered by an exemption granted under this subsection, to insure that any such part so exempted is adequately accounted for and not disposed of contrary to the provisions of this Act. No regulation prescribed by the Secretary to carry out the purposes of this subsection shall be subject to section 4(f)(2)(A)(i) of this Act.

(6)(A) Any contract for the sale of pre-Act endangered species parts which is entered into by the Administrator of General Services prior to the effective date of this subsection and pursuant to the notice published in the Federal Register on January 9, 1973, shall not be rendered invalid by virtue of the fact that fulfillment of such contract may be prohibited under section 9(a)(1)(F).

(B) In the event that this paragraph is held invalid, the validity of the remainder of the Act, including the remainder of this subsection, shall not be affected.

(7) Nothing in this subsection shall be construed to—

(A) exonerate any person from any act committed in violation of paragraphs (1)(A), (1)(E), or (1)(F) of section 9(a) prior to the date of enactment of this subsection; or

(B) immunize any person from prosecution for any such act.

(g) In connection with any action alleging a violation of section 9, any person claiming the benefit of any exemption or permit under this Act shall have the burden of proving that the exemption or permit is applicable, has been granted, and was valid and in force at the time of the alleged violation.

(h) CERTAIN ANTIQUE ARTICLES. — (1) Sections 4(d), 9(a), and 9(c) do not apply to any article (other than scrimshaw) which—

(A) was made before 1830,

(B) is composed in whole or in part of any endangered species or threatened species listed under section 4,

(C) has not been repaired or modified with any part of any such species on or after the date of the enactment of this Act, and

(D) is entered at a port designated under paragraph (3).

(2) Any person who wishes to import an article under the exception provided by this subsection shall submit to the customs officer concerned at the time of entry of the article such documentation as the Secretary of the Treasury, after consultation with the Secretary of the Interior, shall by regulation require as being necessary to establish that the article meets the requirements set forth in paragraph (1)(A), (B), and (C).

(D) any term or condition prescribed pursuant to paragraph (5)(A) or (B), or both, which the Secretary deems necessary or appropriate.

(5) The Secretary shall prescribe such regulations as he deems necessary and appropriate to carry out the purposes of this subsection. Such regulations may set forth—

(A) terms and conditions which may be imposed on applicants for exemptions under this subsection (including, but not limited to, requirements that applicants register inventories, keep complete sales records, permit duly authorized agents of the Secretary to inspect such inventories and records, and periodically file appropriate reports with the Secretary); and

(B) terms and conditions which may be imposed on any subsequent purchaser of any pre-Act endangered species part covered by an exemption granted under this subsection, to insure that any such part so exempted is adequately accounted for and not disposed of contrary to the provisions of this Act. No regulation prescribed by the Secretary to carry out the purposes of this subsection shall be subject to section 4(f)(2)(A)(i) of this Act.

(6)(A) Any contract for the sale of pre-Act endangered species parts which is entered into by the Administrator of General Services prior to the effective date of this subsection and pursuant to the notice published in the Federal Register on January 9, 1973, shall not be rendered invalid by virtue of the fact that fulfillment of such contract may be prohibited under section 9(a)(1)(F).

(B) In the event that this paragraph is held invalid, the validity of the remainder of the Act, including the remainder of this subsection, shall not be affected.

(7) Nothing in this subsection shall be construed to—

(A) exonerate any person from any act committed in violation of paragraphs (1)(A), (1)(E), or (1)(F) of section 9(a) prior to the date of enactment of this subsection; or

(B) immunize any person from prosecution for any such act.

(g) In connection with any action alleging a violation of section 9, any person claiming the benefit of any exemption or permit under this Act shall have the burden of proving that the exemption or permit is applicable, has been granted, and was valid and in force at the time of the alleged violation.

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(3) The Secretary of the Treasury, after consultation with the Secretary of the Interior, shall designate one port within each customs region at which articles described in paragraph (1)(A), (B), and (C) must be entered into the customs territory of the United States.

(4) Any person who imported, after December 27, 1973, and on or before the date of the enactment of the Endangered Species Act Amendments of 1978, any article described in paragraph (1) which—

(A) was not repaired or modified after the date of importation with any part of any endangered species or threatened species listed under section 4;

(B) was forfeited to the United States before such date of the enactment, or is subject to forfeiture to the United States on such date of enactment, pursuant to the assessment of a civil penalty under section 11; and

(C) is in the custody of the United States on such date of enactment,

may, before the close of the one-year period beginning on such date of enactment, make application to the Secretary for return of the article. Application shall be made in such form and manner, and contain such documentation, as the Secretary prescribes. If on the basis of any such application which is timely filed, the Secretary is satisfied that the requirements of this paragraph are met with respect to the article concerned, the Secretary shall return the article to the applicant and the importation of such article shall, on and after the date of return, be deemed to be a lawful importation under this Act.

(h)(1) TELLICO AND GRAYROCKS PROJECTS. — Notwithstanding any other provision of this Act, the Committee shall, within 30 days of the date of the enactment of the Endangered Species Act Amendments of 1978, proceed to consider the exemption of the Tellico Dam and Reservoir Project and the Grayrocks Dam and Reservoir Project from the requirements of section 7(a). For the purposes of such consideration, the Committee shall grant an exemption to such projects if the criteria of section 7(h)(1)(A)(i) and 7(h)(1)(A)(ii) are met. A decision on any such exemption shall be made within 90 days after the date of the enactment of the Endangered Species Act Amendments of 1978. If no decision is made within such 90-day period, such project shall be deemed to be exempted from the requirements of section 7(a).

(2) Following the rendering of a biological opinion by the United States Fish and Wildlife Service concerning the effect, if any, of the operation of the Missouri Basin Power Project on endangered species or their critical habitat, the responsible officers of the Rural Electrification Administration, the Secretary of the Interior, and the Secretary of the Army, shall require such modifications in the operation or design of the project as they may determine are required to insure that actions authorized, funded, or carried out by them, relating to the Missouri Basin Power Project do not jeopardize the continued existence of such endangered species or result in the destruction or adverse modification of habitat of such species which is or has been determined to be critical by the Secretary of the Interior, after consultation as appropriate with the affected States.

[(h), (i) added by 95-632]

(3) The Secretary of the Treasury, after consultation with the Secretary of the Interior, shall designate one port within each customs region at which articles described in paragraph (1)(A), (B), and (C) must be entered into the customs territory of the United States.

(4) Any person who imported, after December 27, 1973, and on or before the date of the enactment of the Endangered Species Act Amendments of 1978, any article described in paragraph (1) which—

(A) was not repaired or modified after the date of importation with any part of any endangered species or threatened species listed under section 4;

(B) was forfeited to the United States before such date of the enactment, or is subject to forfeiture to the United States on such date of enactment, pursuant to the assessment of a civil penalty under section 11; and

(C) is in the custody of the United States on such date of enactment,

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[(h), (i) added by 95-632]

PENALTIES AND ENFORCEMENT

SEC. 11(a) CIVIL PENALTIES — (1) Any person who knowingly violates, and any person engaged in business as an importer or exporter of fish, wildlife, or plants who violates, any provision of this Act, or any provision of any permit or certificate issued hereunder, or of any regulation issued in order to implement subsection (a)(1)(A), (B), (C), (D), (E), or (F), (a)(2)(A), (B), or (C), (c), (d) (other than regulation relating to recordkeeping or filing of reports), (f) or (g) of section 9 of this Act, may be assessed a civil penalty by the Secretary of not more than $10,000 for each violation. Any person who knowingly violates, and any person engaged in business as an importer or exporter of fish, wildlife, or plants who violates, any provision of any other regulation issued under this Act may be assessed a civil penalty by the Secretary of not more than $5,000 for each such violation. Any person who otherwise violates any provision of this Act, or any regulation, permit, or certificate issued hereunder, may be assessed a civil penalty by the Secretary of not more than $500 for each such violation. No penalty may be assessed under this subsection unless such person is given notice and opportunity for a hearing with respect to such violation. Each violation shall be a separate offense. Any such civil penalty may be remitted or mitigated by the Secretary. Upon any failure to pay a penalty assessed under this subsection, the Secretary may request the Attorney General to institute a civil action in a district court of the United States for any district in which such person is found, resides, or transacts business to collect the penalty and such court shall have jurisdiction to hear and decide any such action. The court shall hear such action on the record made before the Secretary and shall sustain his action if it is supported by substantial evidence on the record considered as a whole.

[(a) amended by PL 95-632]

(3) Notwithstanding any other provision of this Act, no civil penalty shall be imposed if it can be shown by a preponderance of the evidence that the defendant committed an act based on a good faith belief that he was acting to protect himself or herself, a member of his or her family, or any other individual from bodily harm, from any endangered or threatened species.

[(3) added by PL 95-632]

(2) Hearings held during proceedings for the assessment of civil penalties by paragraph (1) of this subsection shall be conducted in accordance with section 554 of title 5, United States Code. The Secretary may issue subpoenas for the attendance and testimony of witnesses and the production of relevant papers, books, and documents, and administer oaths. Witnesses summoned shall be paid the same fees and mileage that are paid to witnesses in the courts of the United States. In case of contumacy or refusal to obey a subpoena served upon any person pursuant to this paragraph, the district court of the United States for any district in which such person is found or resides or transacts business, upon application by the United States and after notice to such person, shall have jurisdiction to issue an order requiring such person to appear and give testimony before Secretary or to appear and produce documents before the Secretary, or both, and any failure to obey such order of the court may be punished by such court as a contempt thereof.

PENALTIES AND ENFORCEMENT

SEC. 11(a) CIVIL PENALTIES — (1) Any person who knowingly violates, and ~~any person engaged in business as an importer or exporter of fish, wildlife, or plants who violates~~, any provision of this Act, or any provision of any permit or certificate issued hereunder, or of any regulation issued in order to implement subsection (a)(1)(A), (B), (C), (D), (E), or (F), (a)(2)(A), (B), or (C), (c), (d) (other than regulation relating to recordkeeping or filing of reports), (f) or (g) of section 9 of this Act, may be assessed a civil penalty by the Secretary of not more than $10,000 for each violation. Any person who knowingly violates, ~~and any person engaged in business as an importer or exporter of fish, wildlife, or plants who violates~~ any provision of any other regulation issued under this Act may be assessed a civil penalty by the Secretary of not more than $5,000 for each such violation. Any person who otherwise violates any provision of this Act, or any regulation, permit, or certificate issued hereunder, may be assessed a civil penalty by the Secretary of not more than $500 for each such violation. No penalty may be assessed under this subsection unless such person is given notice and opportunity for a hearing with respect to such violation. Each violation shall be a separate offense. Any such civil penalty may be remitted or mitigated by the Secretary. Upon any failure to pay a penalty assessed under this subsection, the Secretary may request the Attorney General to institute a civil action in a district court of the United States for any district in which such person is found, resides, or transacts business to collect the penalty and such court shall have jurisdiction to hear and decide any such action. The court shall hear such action on the record made before the Secretary and shall sustain his action if it is supported by substantial evidence on the record considered as a whole.

[(a) amended by PL 95-632]

(3) Notwithstanding any other provision of this Act, no civil penalty shall be imposed if it can be shown by a preponderance of the evidence that the defendant committed an act based on a good faith belief that he was acting to protect himself or herself, a member of his or her family, or any other individual from bodily harm, from any endangered or threatened species.

[(3) added by PL 95-632]

(2) Hearings held during proceedings for the assessment of civil penalties by paragraph (1) of this subsection shall be conducted in accordance with section 554 of title 5, United States Code. The Secretary may issue subpoenas for the attendance and testimony of witnesses and the production of relevant papers, books, and documents, and administer oaths. Witnesses summoned shall be paid the same fees and mileage that are paid to witnesses in the courts of the United States. In case of contumacy or refusal to obey a subpoena served upon any person pursuant to this paragraph, the district court of the United States for any district in which such person is found or resides or transacts business, upon application by the United States and after notice to such person, shall have jurisdiction to issue an order requiring such person to appear and give testimony before Secretary or to appear and produce documents before the Secretary, or both, and any failure to obey such order of the court may be punished by such court as a contempt thereof.

(b) CRIMINAL VIOLATIONS. — (1) Any person who knowingly violates any provision of this Act, of any permit or certificate issued hereunder, or of any regulation issued in order to implement subsection (a)(1)(A), (B), (C), (D), (E), or (F), (a)(2)(A), (B), or (C), (c), (d) (other than a regulation relating to recordkeeping, or filing of reports), (f), or (g) of section 9 of this Act shall, upon conviction, be fined not more than $20,000 or imprisoned for not more than one year, or both. Any person who knowingly violates any provision of any other regulation issued under this Act shall, upon conviction, be fined not more than $10,000 or imprisoned for not more than six months, or both.

(2) The head of any Federal agency which has issued a lease, license, permit, or other agreement authorizing a person to import or export fish, wildlife, or plants, or to operate a quarantine station for imported wildlife, or authorizing the use of Federal lands, including grazing of domestic livestock, to any person who is convicted of a criminal violation of this Act or any regulation, permit, or certificate issued hereunder may immediately modify, suspend, or revoke each lease, license, permit, or other agreement. The Secretary shall also suspend for a period of up to one year, or cancel, any Federal hunting or fishing permits or stamps issued to any person who is convicted of a criminal violation of any provision of this Act or any regulation, permit, or certificate issued hereunder. The United States shall not be liable for the payments of any compensation, reimbursement, or damages in connection with the modification, suspension, or revocation of any leases, licenses, permits, stamps, or other agreements pursuant to this section.

[(2) amended by PL 95-632]

(3) Notwithstanding any other provision of this Act, it shall be a defense to prosecution under this subsection if the defendant committed the offense based on a good faith belief that he was acting to protect himself or herself, a member of his or her family, or any other individual, from bodily harm from any endangered or threatened species.

[(3) added by PL 95-632]

(c) DISTRICT COURT JURISDICTION. — The several district courts of the United States, including the courts enumerated in section 460 of title 28, United States Code, shall have jurisdiction over any actions arising under this Act. For the purpose of this Act, American Samoa shall be included within the judicial district of the District Court of the United States for the District of Hawaii.

(d) REWARDS. — Upon the recommendation of the Secretary, the Secretary of the Treasury is authorized to pay an amount equal to one-half of the civil penalty or fine paid, but not to exceed $2,500, to any person who furnishes information which leads to a finding of civil violation or a conviction of a criminal violation of any provision of this Act or any regulation or permit issued thereunder. Any officer or employee of the United States or of any State or local government who furnishes information or renders service in the performance of his official duties shall not be eligible for payment under this section.

(e) ENFORCEMENT. — (1) The provisions of this Act and any regulations or permits issued pursuant thereto shall be enforced by the Secretary, the Secretary of the Treasury, or the Secretary of the Department in which the Coast Guard is operating, or all such Secretaries. Each such Secretary may utilize by agreement, with or without reimbursement, the personnel, services, and facilities of any other Federal agency or any State agency for purposes of enforcing this Act.

(2) The judges of the district courts of the United States and the United States magistrates may within their respective jurisdictions, upon proper oath or affirmation showing probable cause, issue such warrants or

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(b) CRIMINAL VIOLATIONS. — (1) Any person who ~~knowingly~~ violates any provision of this Act, of any permit or certificate issued hereunder, or of any regulation issued in order to implement subsection (a)(1)(A), (B), (C), (D), (E), or (F), (a)(2)(A), (B), or (C), (c), (d) (other than a regulation relating to recordkeeping, or filing of reports), (f), or (g) of section 9 of this Act shall, upon conviction, be fined not more than $20,000 or imprisoned for not more than one year, or both. Any person who ~~knowingly~~ violates any provision of any other regulation issued under this Act shall, upon conviction, be fined not more than $10,000 or imprisoned for not more than six months, or both.

willfully

willfully

(2) The head of any Federal agency which has issued a lease, license, permit, or other agreement authorizing a person to import or export fish, wildlife, or plants, or to operate a quarantine station for imported wildlife, or authorizing the use of Federal lands, including grazing of domestic livestock, to any person who is convicted of a criminal violation of this Act or any regulation, permit, or certificate issued hereunder may immediately modify, suspend, or revoke each lease, license, permit, or other agreement. The Secretary shall also suspend for a period of up to one year, or cancel, any Federal hunting or fishing permits or stamps issued to any person who is convicted of a criminal violation of any provision of this Act or any regulation, permit, or certificate issued hereunder. The United States shall not be liable for the payments of any compensation, reimbursement, or damages in connection with the modification, suspension, or revocation of any leases, licenses, permits, stamps, or other agreements pursuant to this section.

[(2) amended by PL 95-632]

(3) Notwithstanding any other provision of this Act, it shall be a defense to prosecution under this subsection if the defendant committed the offense based on a good faith belief that he was acting to protect himself or herself, a member of his or her family, or any other individual, from bodily harm from any endangered or threatened species.

[(3) added by PL 95-632]

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(2) The judges of the district courts of the United States and the United States magistrates may within their respective jurisdictions, upon proper oath or affirmation showing probable cause, issue such warrants or

other process as may be required for enforcement of this Act and any regulation issued thereunder.

(3) Any person authorized by the Secretary, the Secretary of the Treasury, or the Secretary of the Department in which the Coast Guard is operating, to enforce this Act may detain for inspection and inspect any package, crate, or other container, including its contents, and all accompanying documents, upon importation or exportation. Such person may make arrests without a warrant for any violation of this Act if he has reasonable grounds to believe that the person to be arrested is committing the violation in his presence or view and may execute and serve any arrest warrant, search warrant, or other warrant or civil or criminal process issued by any officer or court of competent jurisdiction for enforcement of this Act. Such person so authorized may search and seize, with or without a warrant, as authorized by law. Any fish, wildlife, property, or item so seized shall be held by any person authorized by the Secretary, the Secretary of the Treasury, or the Secretary of the Department in which the Coast Guard is operating pending disposition of civil or criminal proceedings, or the institution of an action in rem for forfeiture of such fish, wildlife, property, or item pursuant to paragraph (4) of the subsection, except that the Secretary may, in lieu of holding such fish, wildlife, property, or item, permit the owner or consignee to post a bond or other surety satisfactory to the Secretary, but upon forfeiture of any such property to the United States, or the abandonment or waiver of any claim to any such property, it shall be disposed of (other than by sale to the general public) by the Secretary in such a manner, consistent with the purposes of this Act, as the Secretary shall by regulation prescribe.

(4)(A) All fish or wildlife or plants taken, possessed, sold, purchased, offered for sale or purchase, transported, delivered, received, carried, shipped, exported, or imported contrary to the provisions of this Act, any regulation made pursuant thereto, or any permit or certificate issued hereunder shall be subject to forfeiture to the United States.

(B) All guns, traps, nets, and other equipment, vessels, vehicles, aircraft, and other means of transportation used to aid the taking, possessing, selling, purchasing, offering for sale or purchase, transporting, delivering, receiving, carrying, shipping, exporting, or importing of any fish or wildlife or plants in violation of this Act, any regulation made pursuant thereto, or any permit or certificate issued thereunder shall be subject to forfeiture to the United States upon conviction of a criminal violation pursuant to section 11(b)(1) of this Act.

(5) All provisions of law relating to the seizure, forfeiture, and condemnation of a vessel for violation of the customs laws, the disposition of such vessel or the proceeds from the sale thereof, and the remission or mitigation of such forfeiture, shall apply to the seizures and forfeitures incurred, or alleged to have been incurred, under the provisions of this Act, insofar as such provisions of law are applicable and not inconsistent with the provisions of this Act, except that all powers, rights, and duties conferred or imposed by the customs laws up-

other process as may be required for enforcement of this Act and any regulation issued thereunder.

(3) Any person authorized by the Secretary, the Secretary of the Treasury, or the Secretary of the Department in which the Coast Guard is operating, to enforce this Act may detain for inspection and inspect any package, crate, or other container, including its contents, and all accompanying documents, upon importation or exportation. Such person may make arrests without a warrant for any violation of this Act if he has reasonable grounds to believe that the person to be arrested is committing the violation in his presence or view and may execute and serve any arrest warrant, search warrant, or other warrant or civil or criminal process issued by any officer or court of competent jurisdiction for enforcement of this Act. Such person so authorized may search and seize, with or without a warrant, as authorized by law. Any fish, wildlife, property, or item so seized shall be held by any person authorized by the Secretary, the Secretary of the Treasury, or the Secretary of the Department in which the Coast Guard is operating pending disposition of civil or criminal proceedings, or the institution of an action in rem for forfeiture of such fish, wildlife, property, or item pursuant to paragraph (4) of the subsection, except that the Secretary may, in lieu of holding such fish, wildlife, property, or item, permit the owner or consignee to post a bond or other surety satisfactory to the Secretary, but upon forfeiture of any such property to the United States, or the abandonment or waiver of any claim to any such property, it shall be disposed of (other than by sale to the general public) by the Secretary in such a manner, consistent with the purposes of this Act, as the Secretary shall by regulation prescribe.

(4)(A) All fish or wildlife or plants taken, possessed, sold, purchased, offered for sale or purchase, transported, delivered, received, carried, shipped, exported, or imported contrary to the provisions of this Act, any regulation made pursuant thereto, or any permit or certificate issued hereunder shall be subject to forfeiture to the United States.

(B) All guns, traps, nets, and other equipment, vessels, vehicles, aircraft, and other means of transportation used to aid the taking, possessing, selling, purchasing, offering for sale or purchase, transporting, delivering, receiving, carrying, shipping, exporting, or importing of any fish or wildlife or plants in violation of this Act, any regulation made pursuant thereto, or any permit or certificate issued thereunder shall be subject to forfeiture to the United States upon conviction of a criminal violation pursuant to section 11(b)(1) of this Act.

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on any officer or employee of the Treasury Department shall, for the purposes of this Act, be exercised or performed by the Secretary or by such persons as he may designate.

(f) REGULATIONS. — The Secretary, the Secretary of the Treasury, and the Secretary of the Department in which the Coast Guard is operating, are authorized to promulgate such regulations as may be appropriate to enforce this Act, and charge reasonable fees for expenses to the Government connected with permits or certificates authorized by this Act including processing applications and reasonable inspections, and with the transfer, board, handling, or storage of fish or wildlife or plants and evidentiary items seized and forfeited under this Act. All such fees collected pursuant to this subsection shall be deposited in the Treasury to the credit of the appropriation which is current and chargeable for the cost of furnishing the services. Appropriated funds may be expended pending reimbursement from parties in interest.

(g) CITIZEN SUITS. — (1) Except as provided in paragraph (2) of this subsection any person may commence a civil suit on his own behalf —

(A) to enjoin any person, including the United States and any other governmental instrumentality or agency (to the extent permitted by the eleventh amendment to the Constitution), who is alleged to be in violation of any provision of this Act or regulation issued under the authority thereof; or

(B) to compel the Secretary to apply, pursuant to section 6(g)(2)(B)(ii) of this Act, the prohibitions set forth in or authorized pursuant to section 4(d) or section 9(a)(1)(B) of this Act with respect to the taking of any resident endangered species or threatened species within any State.

The district courts shall have jurisdiction, without regard to the amount in controversy or the citizenship of the parties, to enforce any such provision or regulation, as the case may be. In any civil suit commenced under subparagraph (B) the district court shall compel the Secretary to apply the prohibition sought if the court finds that the allegation that an emergency exists is supported by substantial evidence.

(2)(A) No action may be commenced under subparagraph (1)(A) of this section —

(i) prior to sixty days after written notice of the violation has been given to the Secretary, and to any alleged violator of any such provision or regulation;

(ii) if the Secretary has commenced action to impose a penalty pursuant to subsection (a) of this section; or

(iii) if the United States has commenced and is diligently prosecuting a criminal action in a court of the United States or a State to redress a violation of any such provision or regulation.

(B) No action may be commenced under subparagraph (1)(B) of this section —

(i) prior to sixty days after written notice has been given to the Secretary setting forth the reasons why an emergency is thought to exist with respect to an endangered species or a threatened species in the State concerned; or

on any officer or employee of the Treasury Department shall, for the purposes of this Act, be exercised or performed by the Secretary or by such persons as he may designate.

(f) REGULATIONS. — The Secretary, the Secretary of the Treasury, and the Secretary of the Department in which the Coast Guard is operating, are authorized to promulgate such regulations as may be appropriate to enforce this Act, and charge reasonable fees for expenses to the Government connected with permits or certificates authorized by this Act including processing applications and reasonable inspections, and with the transfer, board, handling, or storage of fish or wildlife or plants and evidentiary items seized and forfeited under this Act. All such fees collected pursuant to this subsection shall be deposited in the Treasury to the credit of the appropriation which is current and chargeable for the cost of furnishing the services. Appropriated funds may be expended pending reimbursement from parties in interest.

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(B) to compel the Secretary to apply, pursuant to section 6(g)(2)(B)(ii) of this Act, the prohibitions set forth in or authorized pursuant to section 4(d) or section 9(a)(1)(B) of this Act with respect to the taking of any resident endangered species or threatened species within any State.

The district courts shall have jurisdiction, without regard to the amount in controversy or the citizenship of the parties, to enforce any such provision or regulation, as the case may be. In any civil suit commenced under subparagraph (B) the district court shall compel the Secretary to apply the prohibition sought if the court finds that the allegation that an emergency exists is supported by substantial evidence.

(2)(A) No action may be commenced under subparagraph (1)(A) of this section —

(i) prior to sixty days after written notice of the violation has been given to the Secretary, and to any alleged violator of any such provision or regulation;

(ii) if the Secretary has commenced action to impose a penalty pursuant to subsection (a) of this section; or

(iii) if the United States has commenced and is diligently prosecuting a criminal action in a court of the United States or a State to redress a violation of any such provision or regulation.

(B) No action may be commenced under subparagraph (1)(B) of this section —

(i) prior to sixty days after written notice has been given to the Secretary setting forth the reasons why an emergency is thought to exist with respect to an endangered species or a threatened species in the State concerned; or

(ii) if the Secretary has commenced and is diligently prosecuting action under section [illegible] of this Act to determine whether any such emergency exists.

(3)(A) Any suit under this subsection may be brought in the judicial district in which the violation occurs.

(B) In any such suit under this subsection in which the United States is not a party, the Attorney General, at the request of the Secretary, may intervene on behalf of the United States as a matter of right.

(4) The court, in issuing any final order in any suit brought pursuant to paragraph (1) of this subsection, may award costs of litigation (including reasonable attorney and expert witness fees) to any party, whenever the court determines such award is appropriate.

(5) The injunctive relief provided by this subsection shall not restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any standard or limitation or to seek any other relief (including relief against the Secretary or a State agency).

(h) COORDINATION WITH OTHER LAWS.—The Secretary of Agriculture and the Secretary shall provide for appropriate coordination of the administration of this Act with the administration of the animal quarantine laws (21 U.S.C. 101-105, 111-135b, and 612-614) and section 306 of the Tariff Act of 1930 (19 U.S.C. 1306). Nothing in this Act or any amendment made by this Act shall be construed as superseding or limiting in any manner the functions of the Secretary of Agriculture under any other law relating to prohibited or restricted importations or possession of animals and other articles and no proceeding or determination under this Act shall preclude any proceeding or be considered determinative of any issue of fact or law in any proceeding under any Act administered by the Secretary of Agriculture. Nothing in this Act shall be construed as superseding or limiting in any manner the functions and responsibilities of the Secretary of the Treasury under the Tariff Act of 1930, including, without limitation, section 527 of that Act (19 U.S.C. 1527), relating to the importation of wildlife taken, killed, possessed, or exported to the United States in violation of the laws or regulations of a foreign country.

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(3)(A) Any suit under this subsection may be brought in the judicial district in which the violation occurs.

(B) In any such suit under this subsection in which the United States is not a party, the Attorney General, at the request of the Secretary, may intervene on behalf of the United States as a matter of right.

(4) The court, in issuing any final order in any suit brought pursuant to paragraph (1) of this subsection, may award costs of litigation (including reasonable attorney and expert witness fees) to ~~any~~ the prevailing party, whenever the court determines such award is appropriate.

(5) The injunctive relief provided by this subsection shall not restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any standard or limitation or to seek any other relief (including relief against the Secretary or a State agency).

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ENDANGERED PLANTS

SEC. 12. The Secretary of the Smithsonian Institution, in conjunction with other affected agencies, is authorized and directed to review (1) species of plants which are now or may become endangered or threatened and (2) methods of adequately conserving such species and to report to Congress within one year after the date of the enactment of this Act, the results of such review including recommendations for new legislation or the amendment of existing legislation.

"Compensation for Financial Losses"

"12(a) The Secretary is authorized to compensate persons for financial loss when he determines such persons have suffered financial losses directly caused by requirements or prohibitions of this Act or by regulations promulgated pursuant to authority provided by this Act when such requirements or prohibitions create conditions whereby a person (i) must manage lands owned by him in a manner which eliminates financial gain which would otherwise accrue if such land were managed in the absence of such requirements or prohibitions or (ii) is prevented from taking an animal or plant causing him economic damage.

(b) The Secretary shall issue such regulations as may be necessary to implement this section, including those which (i) prescribe the manner and form for applying for compensation; and (ii) describe the evidence required to substantiate the claim that loss was due to conditions described in subsection (a) of this section; (c) The Secretary shall make the determinations required by this section within 60 days after receipt of an application filed in accordance with subsection (b)(i) of this section. (d) The amount of compensation paid pursuant to this section shall be equal to the economic gain foregone or loss sustained (e) Compensation shall not be paid under this section unless application for such compensation is made (i) within one year after final regulations are issued pursuant to subsection (b)(i) of this section or (ii) within one year after final regulations are issued by the Secretary which establish requirements or prohibitions alleged to cause losses (f) The Secretary's determination shall be an agency final action for purposes of judicial review. (g) There are authorized to be appropriated such sums as may be necessary to carry out the provisions of this section.

(c) Failure to compensate a person whom the Secretary has determined has suffered economic losses under the terms of this section within one year of such determination, shall be considered permission for that person to conduct the action causing economic loss without prosecution, injunction, or penalty otherwise provided in this Act.

CONFORMING AMENDMENTS

SEC. 13. (a) Subsection 4(c) of the Act of October 15, 1966 (80 Stat. 928, 16 U.S.C. 668dd(c)), is further amended by revising the second sentence thereof to read as follows: "With the exception of endangered species and threatened species listed by the Secretary pursuant to section 4 of the Endangered Species Act of 1973 in States wherein a cooperative agreement does not exist pursuant to section 6(c) of that Act, nothing in this Act shall be construed to authorize the Secretary to control or regulate hunting or fishing of resident fish and wildlife on lands not within the system."

(b) Subsection 10(a) of the Migratory Bird Conservation Act (45 Stat. 1224, 16 U.S.C. 715i(a)) and subsection 401(a) of the Act of June 15, 1935 (49 Stat. 383, 16 U.S.C. 715s(a)) are each amended by striking out "threatened with extinction," and inserting in lieu thereof the following: "listed pursuant to section 4 of the Endangered Species Act of 1973 as endangered species or threatened species,".

(c) Section 7(a)(1) of the Land and Water Conservation Fund Act of 1965 (16 U.S.C. 460l — 9(a)(1)) is amended by striking out:

"THREATENED SPECIES. — For any national area which may be authorized for the preservation of species of fish or wildlife that are threatened with extinction." and inserting in lieu thereof the following:

"ENDANGERED SPECIES AND THREATENED SPECIES. — For lands, waters, or interests therein, the acquisition of which is authorized under section 5(a) of the Endangered Species Act of 1973, needed for the purpose of conserving endangered or threatened species of fish or wildlife or plants."

(d) The first sentence of section 2 of the Act of September 28, 1962, as amended (76 Stat. 653, 16 U.S.C. 460k-1), is amended to read as follows:

"The Secretary is authorized to acquire areas of land, or interests therein, which are suitable for—

"(1) incidental fish and wildlife-oriented recreational development,

"(2) the protection of natural resources,

"(3) the conservation of endangered species or threatened species listed by the Secretary pursuant to section 4 of the Endangered Species Act of 1973, or

"(4) carrying out two or more of the purposes set forth in paragraphs (1) through (3) of this section, and are adjacent to, or within, the said conservation areas, except that the acquisition of any land or interest therein pursuant to this section shall be accomplished only with such funds as may be appropriated therefor by the Congress or donated for such purposes, but such property shall not be acquired with funds obtained from the sale of Federal migratory bird hunting stamps."

(e) The Marine Mammal Protection Act of 1972 (16 U.S.C. 1361-1407) is amended—

(1) by striking out "Endangered Species Conservation Act of 1969" in section 3(1)(B) thereof and inserting in lieu thereof the following: "Endangered Species Act of 1973";

(2) by striking out "pursuant to the Endangered Species Conservation Act of 1969" in section 101(a)(3)(B) thereof and inserting in lieu thereof the

CONFORMING AMENDMENTS

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(b) Subsection 10(a) of the Migratory Bird Conservation Act (45 Stat. 1224, 16 U.S.C. 715i(a)) and subsection 401(a) of the Act of June 15, 1935 (49 Stat. 383, 16 U.S.C. 715s(a)) are each amended by striking out "threatened with extinction," and inserting in lieu thereof the following: "listed pursuant to section 4 of the Endangered Species Act of 1973 as endangered species or threatened species,".

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"(2) the protection of natural resources,

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"(4) carrying out two or more of the purposes set forth in paragraphs (1) through (3) of this section, and are adjacent to, or within, the said conservation areas, except that the acquisition of any land or interest therein pursuant to this section shall be accomplished only with such funds as may be appropriated therefor by the Congress or donated for such purposes, but such property shall not be acquired with funds obtained from the sale of Federal migratory bird hunting stamps."

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(2) by striking out "pursuant to the Endangered Species Conservation Act of 1969" in section 101(a)(3)(B) thereof and inserting in lieu thereof the

following "or threatened species pursuant to the Endangered Species Act of 1973".

(3) by striking out "endangered under the Endangered Species Conservation Act of 1969" in section 102(h)(1) thereof and inserting in lieu thereof the following "an endangered species or threatened species pursuant to the Endangered Species Act of 1973", and

(4) by striking out "of the Interior such revisions of the Endangered Species List, authorized by the Endangered Species Conservation Act of 1969," in section 202(a)(6) thereof and inserting in lieu thereof the following "such revisions of the endangered species list and threatened species list published pursuant to section 4(c)(1) of the Endangered Species Act of 1973".

(f) Section 2(l) of the Federal Environmental Pesticide Control Act of 1972 (Public Law 92-516) is amended by striking out the words "by the Secretary of the Interior under Public Law 91-135" and inserting in lieu thereof the words "or threatened by the Secretary pursuant to the Endangered Species Act of 1973".

REPEALER

SEC. 14. The Endangered Species Conservation Act of 1969 (sections 1 through 3 of the Act of October 15, 1966, and sections 1 through 6 of the Act of December 5, 1969, 16 U.S.C. 668aa—668cc-6), is repealed.

AUTHORIZATION OF APPROPRIATIONS

SEC. 15. Except as authorized in sections 6 and 7 of this Act, there are authorized to be appropriated —

(1) not to exceed $23,000,000 for each fiscal years 1979 and 1980, not to exceed $25,000,000 for fiscal year 1981, and not to exceed $27,000,000 for fiscal year 1982 to enable the Department of the Interior to carry out such functions and responsibilities as it may have been given under this Act,

(2) not to exceed $2,500,000 for each of fiscal years 1979 and 1980, not to exceed $3,000,000 for fiscal year 1981, and not to exceed $3,500,000 for fiscal year 1982 to enable the Department of Commerce to carry out such functions and responsibilities as it may have been given under this Act, and

(3) not to exceed $1,500,000 for fiscal year 1980, not to exceed $1,750,000 for fiscal year 1981, and not to exceed $1,850,000 for fiscal year 1982 to enable the Department of Agriculture to carry out its functions and responsibilities with respect to the enforcement of this Act and the Convention which pertain to the importation or exportation of terrestrial plants.

EFFECTIVE DATE

SEC. 16. This Act shall take effect on the date of its enactment.

MARINE MAMMAL PROTECTION ACT OF 1972

SEC. 17. Except as otherwise provided in this Act, no provision of this Act shall take precedence over any more restrictive conflicting provision of the Marine Mammal Protection Act of 1972.

following "or threatened species pursuant to the Endangered Species Act of 1973".

(3) by striking out "endangered under the Endangered Species Conservation Act of 1969" in section 102(h)(1) thereof and inserting in lieu thereof the following "an endangered species or threatened species pursuant to the Endangered Species Act of 1973", and

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Edward C. Creutz, Ph.D.

January 6, 1982

The Honorable John Chafee
United States Senator
Chairman, Subcommittee on
Environmental Pollution
Senate Office Building
Washington, D. C.

Dear Senator Chafee:

I am writing to urge support of a strong Endangered Species Act, relative to the hearings of your Committee. I am addressing you on behalf of all of the professional staff of this institution, including myself. Hawai'i has a disproportionately large number of endangered plants and animals, found only here as a result of evolution on our isolated archipelago; consequently we are acutely aware of the perturbations and dangers to the native biota and the need for protective legislation.

However, we are generally concerned about the maintenance of biological diversity throughout the world. It has been said that the greatest challenge and responsiblity facing humankind today is the mass loss of species and of the genetic diversity within species. This concern can be supported on purely pragmatic grounds with regard to human welfare. With each species that becomes extinct, the options of this and future generations for use and protection of natural resources are significantly reduced. We believe that the United States should set an example of responsibility in enlightened stewardship of the natural environment, which other countries may follow.

I am enclosing copies of two letters, sent as testimony to branches of the Department of the Interior, dated July 15, 1981, and October 13, 1981. One of these letters concerns our opposition to the proposed rewording of the definition of "harm" in the Endangered Species Act and the other concerns our opposition to a proposed taxonomic hierarchy for ranking species of organisms in considering protective action, both of which proposals we feel would dangerously weaken and subvert the intent of the Act. We request that both these letters, as well as this one, be included in the official testimony for your hearings.

Sincerely,

E. Creutz
Director

Wayne C. Gagné

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July 15, 1981

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The Director
Office of Endangered Species
U. S. Fish and Wildlife Service
Department of the Interior
Washington, D. C. 20240

Dear Sir:

The U. S. Fish & Wildlife Service, in promulgating Rules and Regulations to implement Section 9, Prohibited Acts, of the U. S. Endangered Species Act of 1973, on September 26, 1975, adopted the following definition.

> " 'Harm' in the definition of 'take' in the Act means an act or omission which actually injures or kills wildlife, including acts which annoy it to such an extent as to significantly disrupt essential behavioral patterns, which include, but are not limited to, breeding, feeding or sheltering; significant environmental modification or degradation which has such effects is included within the meaning of 'harm'."

(It is extremely important to note here that this is the only place in the Act itself or in the Service's implementing Rules and Regulations that a person--as opposed to the Federal Government or agencies funded or authorized by it, who are specifically prohibited from destruction or modification of habitat critical to an endangered species by Section 7 of the Act--is prohibited from significantly modifying or degrading the habitat of an endangered species.)

The present Proposed Rulemaking, if adopted, would redefine "harm" as follows.

> " 'Harm' in the definition of 'take' in the Act means an act or omission which injures or kills wildlife."

The Service's proposal also makes clear, in discussing the conclusions of an appended Solicitor's Office opinion, that the term "harm" is to be interpreted to include only those actions (and, presumably, non-actions) that are "directed against, and likely to injure or kill, individual wildlife". (Emphasis added.)

That is, this Rulemaking proposes that any person may adversely modify or degrade an endangered species' habitat, and remain completely immune from any penalty under the Endangered Species Act, unless it can be proven that the person's actions directly injure or kill individual animals, even though the environmentally detrimental act may indirectly cause extinction of the entire endangered species.

The Service desires a change in the current definition of "harm" because it is said to contain a "significant ambiguity", and this is explained in the following manner.

> "If the words 'such effects' are read to refer to the phrase 'significantly disrupt essential behavioral patterns', then any significant environmental modification or degradation that disrupts essential behavioral patterns will fall under the definition of harm, regardless of whether an actual killing or injuring of a listed species of wildlife is demonstrated. Under such an interpretation, a showing of habitat modification alone would be sufficient to invoke the criminal penalties of Section 9."

The Service goes on to say that an opinion received from the Solicitor's Office "concluded that such a result is inconsistent with the intent of Congress" in enacting this 1973 legislation; an opinion with which the Service is presently apparently in agreement. (The Service's explanation quoted above, as well as related comments elsewhere in the proposal are somewhat confusing but we presume the Service means that environmental modification or degradation which "significantly disrupts essential behavioral patterns" represents the alleged inconsistency, not literally, "habitat modification alone").

It seems to us that if the Service thinks ambiguity exists in the current definition of "harm", future confusion could easily be avoided by making a simple change in sentence structure within the existing definition, rather than by the radical step of eliminating the only reference in the Act or its implementing Rules and Regulations to prohibition of a person's "significant environmental modification or degradation" of an endangered species' habitat.

However, we feel that the Service's arguments about a seeming ambiguity in its current definition are beside the point. It is our conviction that it is imperative to retain the present prohibition against any person significantly modifying--at least, adversely modifying--or degrading the habitat of an endangered animal species, regardless of whether the detrimental effect on the species is direct or indirect. We think th[illegible] all biologists would agree that, in the case of a [illegible]jority of such endangered species, it is at least [illegible] important that this environmental modification does not significantly disrupt essential behavioral patterns, as it is that it does not directly injure or kill individual animals. In fact, especially in the case of many of the smaller and less obtrusive endangered species, even if desired it might prove a next-to-impossible task to seek out and injure, kill, or capture all existing individuals. But, unfortunately, it would be a relatively easy matter to extinguish the entire population in a very short time without ever directly injuring or killing a single individual animal, simply by disrupting just one essential behavioral pattern of the species through either intentional or unintentional significant modification or degradation of its habitat.

Imagine, for example, the consequences of damming or otherwise blocking stream flow or impeding passage in a river normally ascended by an endangered fish species when spawning. This habitat manipulation might not result in the direct injury or death of a single one of the females denied their essential behavior of traveling to spawning grounds in the river's headwaters, but the resultant failure of reproductive effort in the population brought about by this significant environmental modification would obviously lead to extinction of the entire species within a few years.

Or consider the case of individuals of an endangered bird species, already reduced to quite low numbers by other factors, prevented from successfully nesting because of removal of all suitable trees or other normal egg-laying sites within its habitat. Or an example could be the prevention of seasonal migration of a population of gregarious mammal to its normal communal mating grounds by some adverse modification of its habitat. A number of other similar hypothetical, but not at all improbable, cases could also be cited, of course.

The effects of many environmental modifications to an endangered species' habitat may also prove directly fatal to individual animals, but through processes which are too subtle or too short-lived to be deomonstrated at this early stage in our ecological knowledge of most endangered species. The case of Palila v. Hawaii Department of Land and Natural Resources is specifically cited in the Service's present Proposed Rulemaking as an example in which a Federal Court of Appeals had demonstrated its "fundamental confusion over the distinction between habitat modification and takings". The Service claims that because the State-admitted habitat degradation was not causing the direct injury or death of individual birds, the courts should not have found the State in violation of the Endangered Species Act.

In this instance, although it cannot presently be demonstrated that the habitat destruction by feeding habits of State-maintained feral sheep and goats was directly injuring or killing individual Palila, it is not at all unlikely that if this environmental degradation had not been checked, at some point the amount of total vegetation cover needed for normal protection of adult birds year-round--or perhaps the individual number of a particular tree or understory plant, or even of a native insect species upon which nestling young were fed--would have been reduced throughout the entire remaining habitat to below the minimum necessary for survival of these individual birds. And yet it would obviously be exceedingly difficult, if not impossible, to prove that any particular adult or young bird had died of exposure, abnormal predation, malnutrition, or even starvation, because of this fatal diminution of an ecologically critical plant or animal species.

In legislating the Endangered Species Act of 1973, Congress recognized the indispensable role that habitat plays in the survival of endangered species, by placing first among the Act's three Purposes the provision of "a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved". From this it seems perfectly obvious to us that the intent of Congress in enacting this legislation was to prevent any environmental modification or degradation which, either directly or indirectly, would adversely affect the well-being of either individual endangered animals or the entire populations of such species.

Although we are not legal experts, it seems to us, that in ruling for the plaintiff, the Federal District and Appelate Courts hearing the Palila case neither misunderstood nor misinterpreted either the intent or letter of the Endangered Species Act. On the contrary, we submit that the two courts both used a "common-sense" approach in identifying a significant "taking" of an endangered bird species caused by continued environmental modification of its habitat, and properly used the authority conferred upon them by the Act to end this threat to the survival of the species.

In conclusion, we consider that the ambiguity allegedly perceived in the current definition of "harm" is not a valid problem, if indeed, it even exits. If, however, after reviewing all comments on the Proposed Rulemaking, the Service still desires a redefinition, we suggest consideration of the following wording which, we hope, will remove any uncertainty about the vital relationship among continued existence of an endangered species, nondisruption of its normal behavioral patterns, and proper maintenance of its entire ecosystem.

> " 'Harm' in the definition of 'take' in the Act means any act, omission, or significant environmental modification or degradation of ecosystems which

> injures, kills, or otherwise adversely affects individuals or populations of endangered wildlife, including acts which significantly disrupt essential behavioral patterns, which include, but are not limited to, breeding, feeding, or sheltering."

May we thank you for the opportunity to present this testimony.

Sincerely,

E. Creutz
Director

EC:gkw

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October 13, 1981

Mr. John L. Spinks, Chief
Office of Endangered Species
U.S. Fish and Wildlife Service
Washington, D.C. 20240

Dear Mr. Spinks:

A recent issue of the Endangered Species Technical Bulletin (Vol. 6, No. 8, for August 1981) indicated new guidelines being prepared for ranking candidate species for listing under the Endangered Species Act. While we recognize the desirability of ranking species according to "degree of threat" to their existence, we are quite disturbed about another aspect of the proposed ranking, that is, listing-priority and related activities based on "higher" or "lower" rank of major taxa. Thus, mammals and birds, in that order, are given highest ranking, while invertebrates other than insects or molluscs are lowest, with various other categories ranked in between. It is further indicated that only vertebrates and vascular plants will be involved in listing activities during the coming fiscal year.

The proposed ranking of taxonomic groupings for consideration for endangered or threatened status does not appear to have a scientific rationale and does appear to be counter-productive from a management standpoint as explained below. Therefore, it would seem to be contrary to the spirit, and we believe the expressed intent, of the Endangered Species Act.

While there are different levels of organizational complexity among animals and plants, they apply only by gross anatomical standards, and not in relation to fine structure, bio-chemistry, genetic systems, etc. The terms "higher" and "lower" for plants and animals are used by biologists today as matters of convenience and, particularly, as carryovers from an earlier time of more anthropocentric thinking and far less understanding of the morphology and functioning of life forms and the systems they make up.

Aside from questions regarding the propriety of judgemnts on the deservedness of different taxa to be saved from extinction, an arbitrary ranking of this kind lacks sense in the whole framework of management. We are beginning to develop some real understanding of not only the complexity of ecosystems, but also of some of the specific areas of biotic interactions that relate to species survival. As an example, studies at this institution on the conservation status of Hawaiian arthropods (under contract with the Office of Endangered Species) have provided significant support for the concept of dependence of a broad spectrum of endangered and threatened Hawaiian forest birds on components of the endemic entomofauna. Therefore, we may not be able to save the "higher" vertebrates in this instance without also working to save the "lower" invertebrates. Numerous examples of such interactions between groups assigned to different rankings in the proposed system could be presented, but we are only beginning to investigate the nature of these relationships in detail. In fact, we are presented with a dire situation with the rapid destruction of tropical forests, so that there is great need to survey the tropical biota and at least begin studies on species biology and species interactions before the opportunity is lost through species extinction. Quite obviously, the progress of such work may operate in many cases to provide the means for preventing species extinction.

From a purely anthropocentric viewpoint, as well as in terms of sound biology, the values to be placed on invertebrates and non-vascular plants (i.e., the "lowly" forms proposed for exclusion in species listing activities) must be examined. Not only as components of the life web that contribute to the functioning and stability of natural systems, but as individual species, many of these organisms are known to have extraordinary value in human welfare. One might mention the honey bee, both as a pollinator and for its products. Other examples are legion and, with the advance of science, are increasing exponentially. Often the beneficial values are realized in the least expected species, as in the African mocker swallowtail butterfly, in which analysis of the genetic processes governing color forms has provided an understanding of the causes of the human genetic disease producing Rh babies. Hawaiian insects are also particularly important for genetic studies. The more than 700 species of endemic Drosophila flies have made Hawai'i a principal center for the study of population genetics. The real point is that we can anticipate with confidence that the unstudied, or even unknown, organisms (many of which will be recognized as endangered) include species of immense potential applied (medical, agriculture, etc.) value to humankind.

While fiscal contraints make it necessary to choose projects judiciously in order to more effectively carry out the mandate of the Endangered Species Act, we believe that it is patently obvious that sound management demands an ad hoc and flexible approach to the various biotic groups. Without broad studies now, such as that being done at present on Hawaiian arthropods, the management of "lower" biotic groups may be held back not one year but many. As such studies progress, obvious needs for protective action, through listing, will be encountered. When this happens, human self interest coincides with humanity's ethical responsibility for the biosphere in dictating that such protection be extended to the organisms concerned.

Thank you for considering these comments.

Sincerely yours,

E. Creutz
Director

cc: Senator Daniel Inouye
Senator Sparky Matsunaga
Representative Cecil Heftel
Representative Daniel Akaka

EC:agm

ELSA WILD ANIMAL APPEAL
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(213) 769-8388

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The Honorable John H. Chafee, Chairman
Environmental Pollution Subcommittee of
Environment and Public Works Committee
Senate Office Building
Washington, D. C.

FOR THE RECORD OF THE HEARING–ENDANGERED SPECIES ACT

Dear Mr. Chairman,

Elsa Wild Animal Appeal, a national membership organization, is grateful for this hearing to consider the strengths, shortcomings and the necessity of the ENDANGERED SPECIES ACT.

We believe the Endangered Species Act to be vital to the survival and hopefully the restoration of endangered, threatened, depleted and sensitive species. It has alerted the world to its vanishing life forms and of mans role in this critical situation, hopefully creating an awareness of our responsibility to straighten out the mess we've created.

The Dept. of the Interior it seems has not fully met its obligation under the Act, by not promulgating regulations to implement the 1978 amendments for federal agency consultants (Section 7) and the Secretaries of the Interior and Commerce, to meet and negotiate on controversial projects. These lawfully mandated regulations should no longer be ignored, but should be forthcoming with no further delay!

USFWS review of the Endangered Species Act, tho commendable, is reluctant to fully and vigorously implement the Act. Thus, we are convinced that Congress is the body to review, evaluate and strengthen (as well as re-authorize) the Endangered Species Act.

We appreciate the hearing and ask that this statement be included in the record, and would also appreciate a copy of the Record.

Respectfully,

bevin anne smith

Bevin Anne Smith,
Chairwoman, Conservation Committee

A nonprofit, tax-exempt wildlife conservation corporation

STATEMENT BY ROLAND C. FISCHER, SECRETARY-ENGINEER COLORADO RIVER WATER CONSERVATION DISTRICT, GLENWOOD SPRINGS, COLORADO, AT OVERSIGHT HEARINGS ON THE ENDANGERED SPECIES ACT BEFORE THE SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS, SUBCOMMITTEE ON ENVIRONMENTAL POLLUTION, HON. JOHN. H. CHAFEE, CHAIRMAN

Mr. Chairman, on behalf of the Colorado River Water Conservation District ("CRWCD" or "District"), of which I am Secretary-Engineer, I welcome this opportunity to submit for the record our views on needed reforms in the basic policies and administration of the Endangered Species Act ("ESA" or "Act").

By way of identification, CRWCD is a public agency created in 1937 by an act of the legislature of the State of Colorado to conserve and protect for Colorado the waters of the Colorado River System to which the State is entitled under the Colorado River Compact. The District covers all of twelve and part of three other counties within the State on the western slope of the Continental Divide. It holds numerous conditional decrees for the use of water within the State for domestic, municipal, industrial and hydroelectric purposes. The District has held preliminary permits for hydroelectric projects issued by the Federal Energy Regulatory Commission (FERC) under the Federal Power Act, and is currently a license applicant before FERC for a major multipurpose water conservation and hydroelectric project in northwestern Colorado known as the Juniper-Cross Mountain Project.

The delays, frustrations and expenses that the District has encountered in pursuing its license application for the Juniper-Cross Mountain Project have led us to conclude that Section 7 of the ESA (16 U.S.C. § 1536) is not working, that the 1978 and 1979 amendments to Section 7 have not really achieved a more balanced administration of the Act, and that nothing short of a major overhaul of Section 7 can effecutate a more sensible approach to the preservation of endangered species. Based on our experience with the Act thus far and the experiences of others which we have observed, we believe that Section 7's shortcomings are several.

First, we think that Section 7(c) as currently drafted and as interpreted by the U.S. Fish and Wildlife Service (FWS) misallocates the burden of conducting a detailed "biological assessment" upon the agency whose prospective action may affect an endangered or threatened species (hereafter referred to as the "action agency"). As the statute is now written, the Secretary of the Interior (Secretary) initially will inform the action agency whether any listed species or species proposed for listing "may be present in the area of such proposed action." Once the Secretary has identified any such species, however, the action agency is now required to prepare an extensive biological assessment. Although Section 7(c)(1) specifically states that the action agency shall conduct the biological assessment "for the purpose of identifying any endangered species or threatened species which is likely to be affected" by the agency's action (emphasis added), the FWS has interpreted the provision as requiring the agency to go far beyond the mere identification of species likely to be affected. In fact, the FWS's current draft regulations for administering the Act require, in part that:

When conducting a biological assessment, the Federal agency shall, at a minimum:

> (i) conduct a scientifically sound on-site inspection of the area affected by the action, which must, unless otherwise directed by the Service, include a detailed survey of the area to determine if listed or proposed species are present or occur seasonally and whether suitable habitat exists within the area for either expanding the existing population or potential reintroduction of populations;
>
> (ii) interview recognized experts on the species at issue, including those within the Fish and Wildlife Service, the National Marine Fisheries Service, State conservation agencies, universities and others who may have data not yet found in scientific literature;
>
> (iii) review literature and other scientific data to determine the species' distribution, habitat needs and other biological requirements;
>
> (iv) review and analyze the effects of the action on the species, in terms of individuals and populations including consideration of the cumulative effects of the action on the species and habitat;

> (v) analyze alternative actions that may provide conservation measures;
>
> (vi) conduct any studies necessary to fulfill the requirements of (i) through (v) above.

* * *

[Draft of proposed 50 C.F.R. § 402.11(d)(2).] The FWS draft guidelines also require the action agency to prepare a report documenting the results of its biological assessment. The report must include a discussion of the study methods used and other pertinent information.

We believe it is illogical and unreasonable to put the onus of conducting such a biological assessment upon the action agency, which in most cases has no expertise in fish and wildlife matters. In the case of FERC, while that agency does have fishery biologists on its staff, they are not personnel trained in specific fish listed as endangered and FERC has hired consultants to advise on such matters for them. In practice, then, the burden of supplying data for the biological assessment is passed by the agency to the non-Federal entity which is seeking a license or permit. The license or permit applicant likewise is usually ill-equipped to perform the detailed functions now required by FWS in a biological assessment, and must of course engage outside consultants to carry out those tasks. The question naturally occurs as to why FWS should not accomplish the biological assessment. As the agency which listed the species as endangered to begin with FWS has to have more information on these species than anyone else.

In the case of the District's license application for Juniper-Cross Mountain, the FWS informed FERC under date of October 22, 1980 that the following listed species of endangered animals and plants may occur in the area of influence of the project: bald eagle, American peregrine falcon, Colorado River squawfish, bonytail chub, humpback chub, and Uinta Basin hookless cactus. The Yampa River beardtongue was also indentified as a plant which "may be designated as a proposed species" in the near future, and thus should also be studied. FERC thereafter submitted a data request in April 1981 to CRWCD requiring the District to obtain and report all information necessary to complete a biological assessment for each of these species. In addition to the more "basic" information requested, FERC asked the District to identify spawning and rearing areas or habitat in the Yampa River and in the Green River below the confluence of the Yampa River downstream to Jensen, Utah; to describe the chemical, physical and thermal characteristics of these areas; to identify the seasonal movements and distribution of each of the endangered fishes in the same river stretches; to describe the cumulative effects of this and other projects on each species and its habitat; to describe effects of diurnal water level fluctuation on backwater areas and other habitat types believed to be important to the endangered fishes, etc., all of which was accomplished at substantial cost. This data was submitted July 29, 1981 and thus far there has been no further word to the District on it. While we believe that interagency consultation and cooperation are reasonable requirements to further the purposes of the ESA, we cannot understand why the Act does not designate FWS (or, in appropriate cases, the NMFS) as the lead agency in the preparation of biological assessments. It is these agencies that ostensibly possess the type of knowledge and expertise necessary to conduct the type of biological assessment which their own draft regulations would require. Utilization of FWS and NMFS and their in-house expertise would expedite and make more economically efficient the biological assessment process. As it is, with the current draft regulations placing the burden on FERC, we as the applicant for the project license have yet to get into any of the Section 7 consultation process and in fact have been rebuffed as "premature" in attempts to consult with FWS. Meanwhile project costs continue to escalate.

An even more fundamental question is whether the § 7(c) biological assessment is needed at all. It should be possible to proceed directly to the biological opinion provided for in Section 7(b) which is what Congress appeared to want to do until Section 7(c)'s duplicating biological assessment somehow got added. As long as FWS is required to list endangered and threatened species and to determine their critical habitats, it would seem that that agency should already have most of the information on the population distribution and habitat patterns of the species which is now required to be compiled in a biological assessment.

The second — and most serious — shortcoming of the existing ESA is its imposition of a virtually absolute veto over any Federal action which is "likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary . . . to be critical . . . ." ESA § 7(a)(2). This is not merely a discretionary veto power, but a mandatory one, as the Supreme Court found in the celebrated snail darter case, *TVA v. Hill*. Section 7(a) plainly and simply makes species preservation *the* most important item on the Federal agenda. It effectively bars the exercise of the jurisdiction of other Federal agencies, which have their own legislative mandates, upon a factual finding by the Secretary of the Interior that a listed species or its habitat may be jeopardized. There is no room for Interior to balance other legitimate social goals against the goal of species preservation.

As you are well aware, Congress undertook a lengthy review of the ESA and its administration in 1978, leading to the Endangered Species Act Amendments of that year, Pub. L. 95-632, 92 Stat. 3751 (1978). That effort was undertaken largely as a result of the Supreme Court's holding in *TVA v. Hill*. The major product of the review was the creation of the Endangered Species Committee, a sort of "super agency" whose function is to pass on requests for exemptions from the prohibitions of § 7. But this Committee is hardly an adequate response to the problem of weighing the merits of a potential project, in terms of societal value, against the need to preserve a species. This approach merely superimposes a time-consuming administrative proceeding on an already burdensome regulatory process. In fact, before the seven-member Committee can entertain an exemption application, the application must first go through a seemingly unnecessary preliminary screening by a three-member review board (§ 7(g); 16 U.S.C. § 1536(g)). The 1978 Amendments thus added not just one, but two new tiers to the existent bureaucracy. Moreover, before any part of the exemption process may be invoked, an applicant must have pursued and exhausted every possible administrative remedy within the action agency. See Pittston Company v. Endangered Species Committee, 14 ERC 1257 (D.D.C. 1980), where the U.S. District Court held that the exemption procedure was intended to be only a "last resort." In view of the fact that the exemption procedure is the first stage at which any balancing of the merits of a proposed project versus the need for preservation may legally occur, we question why such a procedure is accorded the lowest priority in the whole legislative scheme.

The exemption committee concept fails on other grounds as well. For one thing, the legislative history shows that the membership of the committee was chosen to reflect a bias in favor of endangered species and therefore, necessarily, a bias against even essential utilization of our Nation's natural resources for the benefit of mankind. Thus, instead of having its project reviewed by a Committee with a balanced range of interests, the exemption applicant can hardly expect even an impartial consideration by the Committee of the relative merits of a proposed activity. This is particularly unfair in view of the bias on endangered species already built into § 7(a). And in practice, the Committee clearly has not functioned as Congress intended it to. After refusing to exempt the TVA's Tellico Dam project, the subject of the TVA v. Hill litigation, the Committee was abruptly reversed by Congress, which went ahead and authorized completion of the dam despite the project's tortuous history. The Committee has yet to pass upon another full-fledged exemption application, because the Grayrocks Dam proceeding that came before it was essentially settled by the parties beforehand, and the Pittston Company case cited above was sent back to EPA under the "last resort" doctrine for yet another administrative determination.

We feel that a further amendment to § 7 is the only way to restore the balance that existed prior to the passage of the ESA amendments in 1973, between the need for preservation, on the one hand, and the other goals of our society on the other. This balance can be restored only by amending § 7 to remove the flat prohibition against agency action which is likely to jeopardize the existence of endangered and threatened species or result in destruction or modification of habitat. Consultation and cooperation between Interior and the agency involved could still be required in furtherance of the purposes of the Act, and steps such as recovery plans and mitigation and enhancement measures might be required. But the action agency should be given the ultimate authority to balance the interests involved and determine whether a project should be carried forth, subject, of course, to judicial review.

In summary, we believe it is essential that the ESA be amended to accomplish the following fundamental reforms: (a) remove the biological assessment requirement of § 7(c) or at least make FWS and NMFS the lead agencies responsible for conducting and/or supervising the biological assessment process; (b) remove the inflexible provision that a mere factual determination by the Secretary that a species or its habitat is likely to be adversely affected shall put an immediate end to a Federal agency action absent a Committee exemption; and (c) put the ultimate decision-making where it belongs — with the action agency.

We believe that all of these objectives are not only admirable but essential. It is clear that none of these objectives is being accomplished by the ESA as it presently stands on the staute books. Instead it lends itself too conveniently to be utilized as an obstructionist tool by special interest groups, however well intended they may be. We urge the Committee to amend the Act, specifically § 7, so that economic and social interests can be taken into account from the outset, along with species preservation, in determining whether a federal action may be undertaken.

Thank you for the opportunity to comment.

Roland C. Fischer
Secretary-Engineer

COMMENTS ON THE
REAUTHORIZATION OF THE
ENDANGERED SPECIES ACT
BY FRIENDS OF THE EARTH

PRESENTED TO THE
SUBCOMMITTEE ON ENVIRONMENTAL POLLUTION
OF THE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
U.S. SENATE

Prepared by
Elizabeth Kaplan
Legislative Director
December 21, 1981

There is no more important law for the future of the environment than the Endangered Species Act. It marked a most remarkable occurrence in politics when the Congress of the United States set aside immediate political concerns and created a visionary policy and program dedicated to the future generations of America. The importance of the Endangered Species Act to this country and to the world can hardly be overstated. It may not prevent all future extinctions, but it guarantees that species in this country are no longer apt to become extinct through inadvertence. It puts powerful controls on the federal government's massive development urges, requiring that each threat to a species from a development project be avoided if at all possible. It prevents government bureaucrats from avoiding responsibility for the survival of species and guarantees that if federal funds are going to be used either to extinguish a species or threaten its existence, that decision will be pulled out of the closet and made by high level appointees of the President in full public view.

Most important, of course, the Endangered Species Act provides public notice of which species are in trouble and makes it illegal to harm them, thus bringing all Americans, and hopefully other nations as well, into the strategy of preserving the diversity of species for the benefit of future generations.

Finally, the Act is a model for the world of a policy and program that is desperately needed around the globe to rescue hundreds of thousands of species, perhaps millions, from extinction.

The importance of maintaining the diversity of species is well documented and has been eloquently presented to this committee by a distinguished panel of scientists. Ironically, the least appreciated species, plants, are probably the most important to the survival of the human race. Wild strains of various grains are probably the key to feeding the growing masses of humanity around the world. Many future cures for deadly diseases will be discovered from species of plants and animals, yet opponents of the Act continue to criticize the Act for protecting "unimportant" weeds and bugs.

Can we this year resist giving in to pressures of short-term profit to safeguard the benefits to our children hidden in the diversity of species? Can we control our incredible urge to solve all problems by building something bigger, more expensive and technologically sophisticated when these projects are clearly only short-term solutions and when they threaten our diversity of species?

Endangered Species Act Already Seriously Weakened

I remind this Committee that this Act is not what it once was. In the eyes of many it is a mere shadow of its former self. It has been so loaded down with regulatory requirements and impossible restrictions in the last two reauthorizations that our once dynamic endangered species program has come just about to a standstill. This is a tragic state of affairs, which this Congress should rectify.

This Committee should give careful study to the consequences of the amendments of 1978 and 1979 and amend the Act to enable it to once more provide genuine protection for threatened species.

First of all, this Committee should investigate why species are no longer being listed. Not one species has been listed under the Reagan Administration. This is not because none are in danger. Nearly fifty "packages" for final listing are ready, but have been held back, according to the Office of Endangered Species, because of the difficulty of complying with the technical requirements of the 1978 and 1979 amendments. In the meantime these species are in danger year after year and not getting protection.

In 1978 an amendment was added, Sec. 4(f)(5), requiring the Office of Endangered Species to drop a proposal if it had not been acted upon within two years. Under that amendment 1700 native plants, 87 foreign plants and 63 animals were dropped from further consideration. In addition, they may not be reproposed unless additional information is presented. How many of these species will ever be listed? How many of them have been reconsidered for listing? If the Department of the Interior dallies another six months to a year, most of the listings which it has ready to go will have to be dropped and may be reproposed only if further evidence warrants it. One of the very unfortunate consequences of this amendment is that some federal agencies, like the Forest Service, were taking steps to protect proposed species. Now that list of proposals is gone and with it the incentive to conserve potentially threatend species. This amendment needs the Committee's attention. Whereas intended to address a real problem of species languishing on the proposal list for years, it marks a hatchet job approach where a scalpel would have served the Act and the country better. Because of continual budget reductions and an anti-environmental Administration moving at a snail's pace to protect species, this provision alone cripples our national commitment to protect species.

It is worth just listing the extraordinary number of requirements added to the Office of Endangered Species' tasks in 1978 and 1979 before it can list a species, define critical habitat, or develop recovery programs. In reviewing this list, the Committee should keep in mind what is happening to the budget of the Office of Endangered Species: approximately a 25% cut in 1982, and we can probably expect a similar cut in 1983. The present scenario shows this most important environmental program on the brink of suffocation from red tape as well as starvation from budget cuts. What has happened to our national commitment to protect species?

New Requirements

1. The Secretary must specify any critical habitat at the time of listing to the maximum extent prudent.

2. The Secretary must publish a notice in the Federal Register and notify the governor of each state in which the Secretary is considering listing a species.

3. Allow the states 90 days to respond.

4. Publish in the Federal Register a summary of all comments and recommendations received on a proposed listing.

5. Consider the economic impact of designating critical habitat and decide whether to exclude all or a portion on the basis that

the benefits of exclusion outweigh the benefits of establishing the critical habitat.

6. Publish a summary of the proposed regulations for a listing and a map of the critical habitat in local newspapers.

7. Notify all local governments in the area of proposal.

8. Hold separate meetings and hearing in the local area concerning the critical habitats.

9. Develop and provide notice for guidelines for the handling of petitions for listing and for priority systems for listing.

10. Develop guidelines for developing and implementing recovery plans.

11. Review all listed species within five years to determine whether they need to continue on the list.

12. Prepare a "status review" prior to the preparation of a proposal for listing.

13. Publish in the Federal Register a review of the status of a listed or unlisted species if petitioned to do so.

There is little wonder that the Office of Endangered Species is making almost no progress these days toward protecting endangered species. What is a wonder is that development interests such as the Western Regional Council are concerned about the threats to their projects from endangered species in the present state of affairs. One could plan and build a dam faster these days than one could unwind all the red tape required to list a species and its critical habitat in the vicinity of the dam.

The irony of tying up the Endangered Specie Act in regulatory requirements is that industry has lost the predictability it needs to plan for future projects. For each listing it is [illegible] uncertainty whether all the procedures will be followed within the required two years time before the government must drop the proposal, find some new information and begin all over again. Thus a project proponent has less idea than ever whether the species near his project will stop it or not. Furthermore, he is now encouraged to litigate every step of the way so as to slow the DOI from making its final determination within the required two years. The Act has been so badly compromised that industry is hard pressed to have any clear idea of what the national policy of protecting endangered species means any more.

Streamlining Urgently Needed

The Congress should this year simplify the many procedural requirements tacked on the Act during the last three years. Freeing the Office of Endangered Species from so much regulatory red tape would also enable project proponents to get speedier decisions and to know where our endangered species are. The faster we list endangered species the more informed other elements of society will be as to where trouble spots are. As it is, projects are now being planned for areas where endangered species might exist, but which we don't know about or which are stuck in the mire of hearings and public notices. It would be well worth our while to spend what it costs to find and list endangered species as quickly as possible and thereby bring some predictability to this enduring conflict.

We have not even discussed the most profound change that was made in 1978, a fundamental shift from a national goal of protecting diverse life to a goal of protecting it sometimes. The addition of the Cabinet-level "God" committee to decide the fate of species in an unnegotiable conflict with projects marked a major withdrawal of our national commitment to endangered species. Fortunately, the exemption process has not been abused and so far can be viewed as a model for resolving conflicts. While we opposed it at the time, it appears to have provided an important pressure valve for conflicts with the Act.

In our view any further strictures placed on the powers of the government to protect endangered species will mark unacceptable compromise of a crucially important national policy. Proposals to restrict listings only to animals or worse, furry animals, completely abdicate the authority of the Endangered Species Act to fulfill its original mandate. In fact, it would mean we are saving probably the least valuable species to human beings because they are cosmetically more attractive. Such a change would make a mockery of the goals of the Act. Either we will maintain our commitment to sustaining the entire complicated web of life, about which we still understand so little, or we will abandon it. We are already close to the edge with a program which hasn't listed a species in a year.

Water Conflicts Exaggerated

We question the reliability of western water claims that the Act is endangering western water development. Let us hope the Congress does not get trapped into trying to find a solution to a problem that might occur rather than one that does. The Grayrocks case raised by the Western Regional Council is an example of a conflict successfully solved by the Cabinet-level committee which gave an exemption with satisfactory mitigation requirements. Grayrocks shows that the principles of the Act can be maintained, and water development can go forward.

We regret that the Houston Toad case has once more been dragged before the Congress. The Committee should be reminded that this case is ancient history and is not typical of the functioning of the Office of Endangered Species for the last three years.

The Western Regional Council complained also of having to address cumulative impacts of projects on species. Unfortunately this is one of the most insidious aspects of water development. It is very often the accumulated restrictions of river flow that ultimately threatens species' viability. Addressing cumulative impacts also spreads the burden of the mitigation more fairly among the parties to blame. If cumulative impacts are addressed early on, in the end it is likely that one project will have to bear the burden of serious restrictions while other projects equally contributory to the problem, will get off scott free.

While the Western Regional Council states that endangered species are causing serious problems to western water development,' nowhere in their statement to this committee do they document that fact. We suggest they document the "tide" that needs "stemming". Once more we see a red flag being waved over what might happen, just as we did back in the 1978 reauthorization.

We cannot afford to weaken this Act further over hypothetical problems. The creation of the Cabinet-level exemption committee is the proper safety valve to enable us to decide among competing values. It would be a grave mistake to reshape this Act to give economic considerations any further priority in conflict resolution. Therefore we strongly object to the proposed amendment that the Secretary must exclude critical habitat designation if he finds that the economic benefits of not setting critical habitat are of greater value than the values of establishing the habitat. In fact, it is totally inappropriate for the Secretary to be weighing economics against the threats to a species. This section should be deleted and the matter of weighing conflicting values left to the Cabinet-level exemption committee.

Remembering The Future

Environmentalists are often accused of using the Endangered Species Act to stop water projects with little concern for the survival of the species themselves. I think this is a false characterization and avoids the fact that the conflict is real. We can no longer pretend that giant and costly construction projects do not have serious destructive consequences to the environment for which we ultimately pay an enormous price. Proper cost-benefit analysis of many, many public projects provides the evidence that alternatives would bring greater benefits in many cases.

ndreds, perhaps thousands, of lakes are dying from acid

copy missing

FRIENDS OF THE SEA OTTER
P.O. BOX 221220, CARMEL CALIFORNIA 93922

New Year's Day, 1982

The Honorable John H. Chafee, Chairman
Subcommittee on Environmental Pollution
Committee on Environment and Public Works
United States Senate
Washington, D.C. 20510

Re: REAUTHORIZATION OF THE ENDANGERED SPECIES ACT
For the Record of the Hearing, December 8 & 10, 1981

Dear Senator Chafee:

FRIENDS OF THE SEA OTTER is pleased to offer testimony in full support of the reauthorization of a strong and effective ENDANGERED SPECIES ACT, without weakening amendments.

We believe our membership to be representative of the commitment of the American people to the preservation of our nation's threatened and endangered species: over 4,200 members in 48 states — many of whom will never even see an otter in their lifetimes — whose concern for the sea otter's survival spans the continent.

We have long been grateful to the Congress for the wisdom and foresight it showed in 1973 when it enacted the ENDANGERED SPECIES ACT.

In the intervening decade, it has become painfully clear that the crisis of human-caused species extinctions is far greater than originally feared, yet today the Endangered Species Act itself is under attack.

Thus, unless the Congress in 1982 again acts with wisdom and responsibility, our nation and the world will have lost the single most important weapon in the struggle to halt the planet-wide flood of extinctions.

We urge you to make the reauthorization of a strong and comprehensive ENDANGERED SPECIES ACT your first priority throughout 1982.

FRIENDS OF THE SEA OTTER was established in 1968 to aid in the protection and maintenance of a healthy population of the southern (or California) sea otter (Enhydra lutris nereis) and its nearshore marine habitat. We focus our testimony on this fragile population, estimated to number only 1,500 animals along approximately 200 miles of Central California's increasingly ravaged coastal waters.

Now, more than ever, if the California sea otter is to survive into the 21st Century, it needs the sustaining protective measures of a vigorous ENDANGERED SPECIES ACT. Without the essential habitat protection mandated by the ACT, the southern sea otter is doomed.

1977: THE SOUTHERN SEA OTTER DECLARED A THREATENED SPECIES

Decimated by the fur trade before the turn of the century, the sea otter was thought to be extinct in California until its "rediscovery" off the Big Sur coast in 1938. Ironically, in this century it is again the sea otter's fur which renders it so vulnerable to destruction by man.

Lacking a layer of blubber, the sea otter relies on its dense fur coat to insulate it from cold Pacific waters. Contact with oil mats the fur, allowing water to penetrate to the skin, and the otter to chill and die within hours.

Not only is the sea otter the most vulnerable to oil of all marine mammals, but the southern population today is a dangerously small remnant of a population once composed of many thousands of otters off the California and Baja California shorelines (pre-fur trade estimates for California alone are 16,000 - 18,000 animals).

In 1977, recognizing that its small population size and restricted distribution made it extremely vulnerable to tanker oil spills (approximately 1/10th of its former population occupying only 1/10th of its former range), the U.S. Fish & Wildlife Service determined that the southern sea otter was a "Threatened Species."

1982: THE SOUTHERN SEA OTTER — THREATENED OR ENDANGERED?

The 1977 decision to list the California sea otter as "Threatened" was based primarily on the oil spill threat from passing tanker traffic or the tanker ports located at each end of the otter's range.

Today, the entire range of this oil-vulnerable mammal is encompassed by proposed offshore oil development in OCS Lease Sales #53 and #73. Should the oil drilling proceed, the sea otter will face the most critical threat to its survival since its rediscovery in 1938. According to the U.S. Fish & Wildlife Service:

> "... the greatest threat to the survivorship and recovery of the southern sea otter population is oil contamination within the sea otter's range."

In 1977, the southern sea otter population was still believed to be slowly increasing in numbers. But today, it appears the population has stopped growing, and 1980 and 1981 have brought record-breaking highs in recorded otter mortality.

In addition to the ever-present threat of an oil spill, the California sea otter continues to be menaced by deterioration of its marine environment from toxic pollutants, increasing human pressures on shellfish resources inside and outside the otter's range (resulting in depletion of food items indispensable for otters); ruthless shooting; and drowning in lethal monofilament gill nets.

THE VALUE OF THE ENDANGERED SPECIES ACT IN PROTECTING THE SOUTHERN SEA OTTER

The listing of the southern sea otter as a "Threatened Species" in 1977 was a turning point in the struggle to prevent the otter from returning again to the brink of extinction.

The ACT's recognition that habitat loss or destruction poses the greatest jeopardy to endangered and threatened species is the key factor in its ability to protect the California sea otter.

This ecosystem approach focuses on biological, not artificial political boundaries; acknowledges the need to address cumulative impacts, indirect as well as direct threats; and insures that all the survival needs of a species will be considered.

The ACT's mandate that all federal agencies shall seek to conserve endangered and threatened species -- and most important, the Section 7 provision that federal agencies shall insure that their actions (direct or indirect) will not jeopardize the continued survival of such species -- offers the greatest hope for the sea otter's future, and must not be weakened.

Section 7 consultation between the U.S. Fish & Wildlife Service and the U.S. Army Corps of Engineers has already resulted in protecting the southern sea otter (and the Monterey Bay area) from foreign oil tankers, insuring continuing oil delivery in safer, U.S. Coast Guard-inspected tankers manned by well-trained U.S. crews.

Section 7 consultation on offshore oil lease sales in the vicinity of the sea otter's range has determined that while leasing and exploration will not jeopardize the otters, development and production may, and consultation will have to be reinitiated before those stages go forward. If the sea otter population in California is to survive, it is essential that it receive full consideration at this critical juncture.

The ACT's recognition of the value of protecting not only species, but subspecies and distinct populations as well, provides the fragile California sea otter population with the extra safeguards it so urgently needs, although fortunately, the Alaskan population is not in need of such extra protection at this time.

The ACT's recognition of the need to protect and enhance "Threatened" species before they are reduced to "Endangered" status greatly increases their chance of survival, and may preclude the need for more heroic (and expensive) measures later on.

The ACT's recognition that conservation must be comprehensive, not just passive protection, provides for such critically important measures as habitat protection and translocation — both of which are crucial to the California sea otter's survival.

The ACT's provision for citizen participation — through citizen-initiated lawsuits and petitions - insures that whatever the priorities of the administration in office, the will of the people to provide needed protection to depleted species shall be recognized.

The ACT's direction that States should maintain conservation programs which better safeguard the Nation's heritage of wildlife for all citizens is of primary importance to the California sea otter.

> This provision safeguarded the otter from a short-sighted state plan which would have restricted its range to a highly oil-vulnerable section of the central California coast in order to keep it from competing with shellfisheries already depleted by human pressures.
>
> Through federal financial assistance and cooperative agreements, the State has been able to provide a sea otter research team which has made important contributions to studying and monitoring the sea otter population.

The ACT's charge that listing determinations be based on the best scientific and commercial data should insure that species will receive protection based on their survival needs, not on political expediency.

The ACT's provision for the development and implementation of Recovery Plans has brought together experts on the California sea otter population and resulted in a comprehensive assessment of the current population status, and the development of a Recovery Plan which, when implemented, will offer hope for the survival of the southern sea otter.

We are grateful for the opportunity to comment on this essential legislation, and again urge you to reauthorize the ENDANGERED SPECIES ACT, without weakening amendments and with full federal funding, for an additional four years.

Sincerely,

Margaret Owings

Margaret Owings
President, Friends of the Sea Otter

FRIENDS OF THE SEA OTTER

Position Paper on Management Perspectives

In 1977, the southern sea otter was declared a Threatened Species by the U.S. Secretary of the Interior, primarily because its small population size (under 2,000) and restricted distribution (1/10th of its former range) made it extremely vulnerable to spills from oil tankers. Since that time, the population has apparently stopped growing in size, tanker traffic has increased, and proposed offshore oil lease sales encompass virtually the entire range of the California population of sea otters — the most vulnerable to oil of all marine mammals.

First, we believe it would be most beneficial for the southern sea otter and for the marine ecosystems in which it plays a significant role for the California otter population to continue to redistribute itself wherever its natural movements may take it. We firmly object to management of southern sea otters by range restriction at this point in their tenuous recovery from near extinction — at a time when critical information about their biology, population dynamics, and long-term effects on marine ecosystems in California is minimal and just beginning to accumulate.

Second, we strongly support management plans to establish two or more successful reserve breeding colonies of southern sea otters in sites elsewhere within their former U.S. range. Such manipulation now appears necessary in order to preserve the California sea otter — virtually its entire population is encompassed by proposed OCS Lease Sales #53 and #73; and almost the entire breeding stock of this depleted southern population of Enhydra lutris already lies in a vulnerable position between two major oil tanker ports — one in Monterey Bay to the north, the other at Estero Bay to the south. The southern sea otter will remain threatened with serious depletion or extinction as long as the entire existing population unit of this particular life form is located along the central California coast — where major oil hazards already exist and where increased oil-related activities are projected.

We believe translocations of reserve colonies of California otters should be undertaken as soon as possible and accomplished with the minimum number of animals necessary to insure success and viability of the transplants, since translocations are hazardous for otters.

Translocation sites should be as well removed as feasible from current or potential oil spill hazards, but should be as close geographically as possible to the present population distribution — preferably at locations where water temperatures and habitat are as similar as possible, where the food supply is abundant, where there are extensive kelp beds and protected coves for shelter, where natural factors are likely to discourage emigration, and where human impacts on a newly introduced otter population and its essential food supply can be effectively controlled. If possible, translocations should be made where recreational and commercial shellfisheries are utilized by relatively few sport or commercial fishermen.

At present, pending the outcome of studies of possible transplant sites within the contiguous U.S.A., we are looking toward San Nicolas Island, in the Outer Santa Barbara Channel, as the best choice for a primary translocation. San Nicolas once supported a sea otter population and today harbors abundant and healthy populations of various marine mammals. It is surrounded by near-pristine waters, abounds in lush kelp forests, and is separated by considerable distance and rough ocean conditions from the mainland. Disturbances to a newly reestablished otter colony, and its habitat, could be more easily controlled and kept minimal at San Nicolas Island than along a highly-developed or easily-accessible mainland coast location. San Nicolas is serviced by aircraft and navy vessels; a landing strip at the NW end of the island could be used for otter transport by air. Most high-interest offshore oil tracts of OCS Lease #48 in the Santa Barbara Channel lie a substantial distance shoreward of San Nicolas, and exploratory drilling in the offshore tracts in the Tanner-Cortes Banks, about 30 miles to the south of San Nicolas, has not been successful.

We oppose long-distance translocations to Canada or Mexico, outside of U.S. jurisdiction, or to other areas north of the contiguous United States.

Third, we believe that the California sea otter's protection under the Endangered Species Act of 1973 should continue until at least two reserve breeding colonies have been successfully established and that its protection under the Marine Mammal Protection Act of 1972 should continue until optimum sustainable population levels have been reached and maintained.

Fourth, we strongly support development of an oil spill contingency plan, increased monitoring of the population, implementation of a habitat protection plan, vigorous state and federal law enforcement efforts against harassment and killing by humans, and a continuing research program on the threatened southern sea otter.

— Dr Betty S. Davis

FRIENDS OF THE SEA OTTER, Box 221220, Carmel, California 93922

FRIENDS OF WILDLIFE
814 West Markland Drive • Monterey Park, California 91754

December 8, 1981

Hon. John H. Chafee, Chairman
Environmental Pollution Subcommittee
Environment and Public Works Committee
Senate Office Building
Washington, D.C. 20510

FOR THE RECORD OF THE HEARING - ENDANGERED SPECIES ACT

Dear Mr. Chairman:

Friends of Wildlife, a national, membership organization, is grateful for this Hearing to consider the strengths, shortcomings, and necessity of the ENDANGERED SPECIES ACT.

We believe the ENDANGERED SPECIES ACT is vital to the survival (and hopefully, to the restoration) of endangered, threatened, depleted, and sensitive species - hence, essential to a healthy ecosystem.

The ENDANGERED SPECIES ACT has put the nation and the world on notice of its vanishing life-forms and loss of diversity. It has lessened the impact on critical species.

However, the Department of the Interior has not fully met its full obligation under the Act. We cite the fact that the Department has not promulgated regulations to implement the 1978 amendments to Section 7 of the ENDANGERED SPECIES ACT - the requirement for federal agency consultations with the Secretaries of Interior and Commerce. These lawfully mandated regulations should be forthcoming without further delay.

While USFWS review of the ENDANGERED SPECIES ACT is commendable, our review of its stated issues and priorities, as well as its reluctance to fully and vigorously implement the Act, convinces us that Congress is the body to review, evaluate, and strengthen (as well as Reauthorize) the ENDANGERED SPECIES ACT.

We appreciate this Hearing, ask that this statement be included in the Record, and respectfully request a copy of the Record.

Sincerely,

Beula Edmiston

Beula Edmiston
President

Chairman Chafee and Senators of the Subcommittee:

These remarks are submitted from a background of many years work as a private citizen on issues involving the welfare of rare species, both animal and plant. My activities have touched upon law, politics, efforts to preserve habitat, scientific studies, and "hands-on" work to restore habitat and augment populations, as well as educational activities. In recent years, I have concentrated on regional rare plant issues in scientific, legislative, and political positions with the California Native Plant Society, and on national and international issues through the National Alliance for Plants, in addition to continuing efforts as a private citizen.

From this background I have watched with considerable dismay what seems to be a developing trend away from effective implementation of the requirements of the Endangered Species Act.

We have seen slashing of funds for acquisition of habitat, for federal-state cooperative agreements (Sec. 6) in support of state programs, and in overall support of the federal endangered species program.

We have seen a declaration of official policy to "deemphasize" listing in favor of pursuing recovery--though funds in support of the latter have also been cut.

We have seen hints that the Administration views the Sec. 7 consultation procedures as duplicating functions already provided for under the National Environmental Policy Act and therefore a possible target for elimination or cutting back.

We have seen a biologically indefensible hierarchy for listing officially set forth, with mammals and birds at the top, plants at number eleven, and so on down through "lower organisms", coupled with suggestions that only those organisms at the top should be bothered with.

We have seen abortive attempts to redefine "harm" so as to restrict its meaning to actual physical injury to the animals involved and eliminate less immediate actions that are just as capable of producing extirpation.

We have seen a cessation of the listing process coupled with repeated delays in the effective date of a final listing involving 44 organisms carried over from the previous Administration until threat of a lawsuit forced the similar stories of practical attributes. Consider, for example, the beetle that has afforded control of the noxious Klamath Weed in California. Or the one credited in DISCOVER for January 1982 with the dramatic control of an investation of Salvinia molesta, a water weed, in an Australia lake.

We are in great danger of allowing a major part of the world's biota to pass into extinction through human activities before we even have any sense of the possible benefits to mankind to be found in these organisms. It was to counter this trend that the Endangered Species Act was enacted. We must not allow shortsightedness to divert us from this goal.

There have been suggestions that the Sec. 7 consultation process to ascertain possible jeopardy be modified and streamlined as duplicating NEPA requirements. California is abundantly endowed with organisms either listed or candidates for listing and I have observed operation of Sec. 7 procedures with respect to them. I can detect no need for changes. It also seems quite plain that the consultation procedures serve a quite different purpose than the requirements for preparation of Environmental Impact Statements in NEPA. EISs merely identify problems; there is no mandate requiring their solution, nor do endangered species, as merely one of many aspects to be considered in an EIS, receive any specially intensive consideration focusing on their welfare. It is quite the contrary with the Sec. 7 procedures. The absence of recourse to the "God committee" exemption mechanism in recent years would seem to support this observation--that solutions usually can be worked out given good faith attempts by the involved federal agency to seek them with the assistance of scientists of the Fish and Wildlife Service.

This philosophy finds its counterpart in the case of a large California public utility, which has its own in-house team of biologists. These people work with the company engineers from the inception of a project and can usefully influence engineering decisions as they evolve, and thereby avoid problems. This is quite unlike the EIS process, where all the decisions have been made and then evaluation of the overall proposal occurs, with the problems already possibly frozen in.

Listing of plants has proceeded very slowly since they were first covered in the ESA in 1973. Although this is frustrating and in some respects perhaps indefensible, I am appreciative of the many problems related to manpower and political difficulties that have been involved. For that reason I am particularly appreciative of the fine work done in California by the Sacramento Endangered Species Office in providing technical assistance to federal agencies where species that are candidates for listing are concerned. Greater formalization of this role nationally would be desirable. According to its press release, however, the Service regards this as an issue of lesser importance. A formal requirement that the Service periodically issue or update a list of candidate species would be helpful in regard to this role. For plants, such a list exists in the Notice of Review published in the Federal Register on 15 December 1980.

The listing process itself presents problems, but I do not believe they revolve around definitions of "hearings" and "meetings", as presented in the Service's press release. They revolve instead more around delays in the review process within the Service and the review by OMB, which operates in secret to apply unknown and hence unquestionable concepts of economic factors.

Here I should like to offer two examples of situations involving California plants, *Amsinckia grandiflora* and *Camissonia benitensis*. Both occur only on federally owned property, the former on a fairly steep hillside in an area not accessible to the public and unused by the managing agency, the latter in a few localities in a remote area of unusual substrate used primarily for vehicular recreation. The localities in question have been fenced against the onslaughts of that activity. I petitioned over four years ago to have the *Camissonia* declared endangered; no one has challenged the biological facts, yet it still is not listed. Apparently further economic information has been requested. The *Amsinckia*, I was told a few months ago, has been completely cleared for listing, yet nothing has happened with it, either. It is difficult to conceive of any problem regarding listing--both are on only federal property and are currently being given protection. There should be no significant impact, economic or otherwise, from listing--merely a bolstering of the incentive of the managing agency to persist in protective measures. So why is listing being held up? What might be done to forestall recurrences of such situations? Might there be time limits set for the various steps of the review process, with perhaps an automatic listing if no reasoned decisions to the contrary have been made public by the time a specified interval has elapsed?

The concept of federal-state cooperative agreements, Sec. 6, is both badly needed and troublesome. Elimination of funding for this program has had serious impact upon many state endangered species programs. Yet there is evidence that the program has often been misused by the states, who request funds for specific projects that then are not carried out. The funds received are often not used in ways even closely related to the projects for which funding was requested. Though it is very important that funding be restored, additionally there should be developed more stringent procedures governing awarding and subsequent use of such moneys.

Thank you for this opportunity to comment.

Alice Q. Howard

6415 Regent Street
Oakland, California 94618

December 1981

THE HUMANE SOCIETY OF THE UNITED STATES

2100 L Street, N.W.
Washington, D.C. 20037
(202) 452-1100

January 8, 1982

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The Honorable John H. Chafee
Chairman
Senate Subcommittee on
Environmental Pollution
United States Senate
Washington, DC 20510

Dear Senator Chafee:

Thank you for the opportunity to present the views of The Humane Society of the United States on the reauthorization of the Endangered Species Act. Earlier, our comments were presented by Michael Bean and Kenneth Berlin. The enclosed comments are presented jointly by The Humane Society of the United States and Defenders of Wildlife.

I want to reiterate in this letter, however, the degree of importance which this organization and its members attach to proper protection for the bobcat under the terms of the Convention on International Trade in Endangered Species, as interpreted by the United States Court of Appeals. We urge you to thoroughly consider our views and to avoid any actions which would weaken protection for the bobcat.

Sincerely,

John W. Grandy
Vice President/Wildlife
and Environment

Enclosure
cc: The Honorable Robert T. Stafford
Members, Senate Committee on
Environment and Public Works
Steve Shimberg

November 3-7
1982 Annual Conference
Danvers (Boston), Massachusetts

Defenders
OF WILDLIFE

January 8, 1982

The Honorable John H. Chafee
Chairman
Senate Subcommittee on
Environmental Pollution
United States Senate
Washington, DC 20510

Dear Senator Chafee:

Defenders of Wildlife wishes to commend you for your personal interest in and strong support for the Endangered Species Act of 1973.

We appreciate the opportunity to inform you of our view concerning the issues associated with the reauthorization of the Act in 1982 (attached).

Of particular concern to us is the controversial Bobcat issue. Although addressed at length during the course of your subcommittee hearings (December 8 and 10), this important issue was presented almost entirely from the perspective of those opposed to the protection mandated for the species.

We respectfully request, therefore, that you consider fully our views in support of the protection mandated for the Bobcat, and in opposition to any weakening amendment of the Act concerning this issue.

Sincerely,

Virginia L. Merchant
Virginia L. Merchant
Endangered Species Specialist
Defenders of Wildlife

Enclosure

cc: The Honorable Robert T. Stafford
Members, Senate Committee on Environment
and Public Works
Steve Shimberg

1244 NINETEENTH STREET, NW • WASHINGTON, DC 20036 • (202) 659-9510

STATEMENT OF DEFENDERS OF WILDLIFE AND THE HUMANE SOCIETY OF THE UNITED STATES FOR THE RECORD OF OVERSIGHT HEARINGS ON THE ENDANGERED SPECIES ACT BEFORE THE SENATE SUBCOMMITTEE ON ENVIRONMENTAL POLLUTION

(December 10 & 12, 1981)

Defenders of Wildlife and the Humane Society of the U.S. appreciate the opportunity to submit this joint statement for the record on behalf of our more than 215,000 members.

At the outset, we wish to stress that both organizations strongly support the Endangered Species Act of 1973 and reauthorization of the Act without weakening amendment. Our views on issues other than the Bobcat issue were addressed in the testimony of M. Bean and K. Berlin before the Subcommittee on behalf of many conservation organizations including Defenders of Wildlife and the Humane Society of the U.S.

Consequently, we limit our remarks herein to the controversial Bobcat issue with which Defenders of Wildlife has been intimately involved for many years. We regret that we were not afforded the opportunity to testify directly before the Subcommittee, while those advocating a decrease in protection for the bobcat testified at length. Indeed, with the volume of testimony delivered in opposition to CITES protection for the Bobcat, one might have thought this protection a travesty.

Nothing could be further from the truth. Bobcat protection, as our remarks will demonstrate, is appropriate and mandated. The opposition to this protection is generated by a combination of the economics of fur, trapping and fish and game agency funding, which is served by continued over-exploitation of the bobcat, rather than U.S. compliance with its international commitments. In short, this committee should reject any amendments to the Endangered Species Act which would decrease protection for the American Bobcat or undermine the CITES Treaty.

Background

In order to control international trade threatening wildlife and plant species, the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) was negotiated in Washington, D.C., in 1973.[1] At that time the world's most exploited cat species were listed in the Treaty's appendices. Among those were the jaguar, margay, ocelot, leopard, and cheetah. Left unprotected were the American Bobcat and Canadian Lynx, among others.

As CITES came into force and the protection for the cats first listed began to work, the pressure of the spotted cat trade shifted to the cat species which did not have CITES protection. Suddenly, the bobcat, lynx, and other unprotected cats began showing up in large quantities in fur markets and fur salons of Europe. The United Kingdom, a major importer, could readily see the shift in exploited cats. As a result, the United Kindgom proposed at the first meeting of CITES' Parties (held in 1976) that all cats which were then unprotected should be protected by CITES Appendix II.[1] The logic was clear, concise, and cogent:

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[1] Largely drafted by the U.S., the CITES Treaty is frequently referred to as the "Washington Convention." Now 73 nations are members to this landmark agreement.

> All cats are potentially involved in the fur trade and the scale of this trade is such that all species must be considered as vulnerable, few populations now remaining unaffected...

The U.K. proposal was accepted by the required two-thirds majority and the cats were listed.[2]

The CITES listing which became effective in February, 1977, was particularly timely for the American Bobcat. The Bobcat's spotted fur, once dismissed by furriers as "inferior", was being avidly sought to replace the fur of endangered cats no longer legally available to the trade. Pelt prices were literally skyrocketing (e.g., Montana: $20.00 in 1968 vs. $200.00 in 1976) and the available information showed that populations were declining. Unfortunately, state fish and game agencies were caught largely unaware by the foreign demand for bobcats. Many state agencies had no management programs or legal authority over the bobcat, while others considered the bobcat a varmit that could be killed at will.

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[1] In order to be listed in Appendix II, animals must either be threatened with extinction, or likely to become so, if trade is not controlled. Clearly, the massive increase in trade in the once unprotected Bobcat, shows the wisdom and appropriateness of this listing.

[2] The U.S. Government, whose delegation included the Executive Vice President of International Association of Fish and Wildlife Agencies, endorsed and supported the U.K. proposal.

In January 1977, Defenders of Wildlife petitioned the Department of Interior to list the Bobcat under the Endangered Species Act (ESA). In July 1977, Interior published notice of its determination that Defenders had presented "substantial evidence", and that a review of the species' status would be undertaken.

The 1977-78 season was the first for which the U.S. was obligated by CITES to determine that the export of Bobcat pelts would "not be detrimental to the survival" of the species. The U.S. Scientific Authority, designated under CITES to make "no detriment" findings, proposed that no Bobcat exports be allowed since what little information was available showed the species' status to be poor.

In response to Defenders' petition under ESA and the Scientific Authority action under CITES, fur and trapping interests generated thousands of letters to Capitol Hill and the Interior Department to pressure the responsible government agencies. Indeed one trapping publication awarded to the head of the Scientific Authority the "Skunk of the Year" award. State fish and game agencies, the funding for which comes largely from fees for licenses sold to hunters and trappers, and their representative, the International Association of Fish and Wildlife

Agencies (IAFWA), protested vigorously as well. Their protests, however, carefully avoided the obvious economic nexus and obscured the issue of bobcat protection with cries of "states' rights." Totally ignored in the protests were the international obligations of the U.S. to enforce CITES both nationally and internationally.

International obligations notwithstanding, both the Scientific Authority and Interior capitulated under the pressure. The Scientific Authority dropped the export ban for the 1977-78 season in favor of state-by-state export quotas which were never enforced. In subsequent years, the Scientific Authority dropped even the quotas and simply approved unlimited export. Interior never conducted the status review of the Bobcat under ESA it had determined previously, in response to Defenders' petition, was warranted.

As a consequence of the Government's failure to comply with CITES or to provide protection for the Bobcat under ESA, Defenders of Wildlife brought a lawsuit under CITES. That suit, which was finally decided by the U.S. Supreme Court's refusal to review the February 3, 1981 Court of Appeals decision, is the crux of current debate.

The Court Of Appeals Decision Is Consistent With CITES, And With Modern Day Wildlife Management And Should Not Be Changed By Congress.

The Court of Appeals invalidated the Government's standards for approving export and, affirmed CITES' clear intent that the benefit of any doubt concerning the effects of trade must be given to species' protection and not to continued exploitation. The Court also established two primary information requirements before Bobcat exports could be allowed from any state. First, the court decision required a "reliable estimate" of the size of the population which would be subjected to killing. Second, the Court required some limitation on the number to be killed.[1]

1. Court of Appeals Decision is consistent with CITES

The Court's ruling with regard to population estimates is compelled by the language and standards of the CITES Treaty itself. Concerning the exports of Appendix II species, such as the Bobcat, CITES Article IV states:

> 2.(a) A Scientific Authority of the State of export has advised that such export will not be detrimental to the survival of that species;
>
> 2. ... the export of specimens of any such species should be limited in order to maintain that species throughout its range at a level consistent with its role in the ecosystem in which it occurs and well above the level at which that species might become eligible for inclusion in Appendix I.
>
> (Emphasis supplied.)

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[1] This aspect of the decision is not discussed herein since no one seems to suggest that it is an inappropriate criterion. Notwithstanding that, many states still do not limit kill in any effective way.

The emphasis on population level reflected in this Treaty language clearly implies the need for quantitative analysis of existing bobcat populations -- beyond gross assessment of change as reflected by population "trend" information -- to determine the appropriate level of export.

2. The Court of Appeals Decision is Consistent with Modern Day Wildlife Management.

Fur and trapping interests and the IAFWA are claiming that reliable population estimates cannot be obtained and that this court - established requirement threatens wildlife management in this country. Under scrutiny these arguments can be seen for what they are -- scare tactics -- motivated by a desire to circumvent the requirements of CITES in order to kill and export unlimited numbers of Bobcats.

It is important to understand that the Court of Appeals requirement of reliable population estimates simply reflects the common-sense proposition that before allowing significant levels of killing, one should have at least a reliable estimate of the minimum size of the population from which the kill will be taken, so that excessive kill can be avoided.

It is also important to understand what the Court of Appeals said about population estimates. The Court specifically rejected unrealistic head counts of animals. Further, the Court did not specify which of the many available techniques for estimating populations should be used or what factors should be considered in establishing reliability. Instead, the Court recognized the discretion of the responsible government agency in this area. For its part, Defenders of Wildlife attempted to assist the Government in complying with the appeals court decision by suggesting guidelines for evaluating the reliability of population estimates. All to no avail.

The District Court-ordered export injunction (April, 1981) made it abundantly clear that the Government must comply with the appeals court ruling for export to be allowed for the current season. Nevertheless, the Government has failed to make a good-faith effort to do so.[1]

Rather, the Government, the fur industry, trappers, hunters and the IAFWA have all proceeded to protest that determining reliable minimum population estimates is impossible, and that they must have "legislative relief." The illogic of this position for federal and state fish and wildlife agencies is readily apparent from the fact that the Wildlife Management Techniques

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[1] The lack of government guidelines or standards for reliably estimating bobcat populations hampered many fish and game agencies attempting to develop reliable estimates and secure export approvals for the 1981-82 season. Some state agencies attempted to develop population estimates for the Bobcat and submit them to the government as early as 1977. (See 43 F.R. 11088; March 16, 1978). Other states lacking reliable estimates of Bobcat numbers have voluntarily closed off harvesting seasons. The state of Connecticut, for example, closed its Bobcat season in 1974 in order to protect the Bobcat until sufficient data could be collected to estimate the population size.

Manual (1969 and 1980 editions) contains chapters devoted to standardized techniques of estimating population size. Moreover, the Manual even asserts, "The methods of estimating numbers of animals have now achieved a level of sophistication worthy of a mature science."[1] The illogic is further apparent from the fact that these same government agencies last year strongly supported legislation (The Fish and Wildlife Conservation Act of 1980,P.L. 96-366) which requires determination of the population size of non-game species.

Clearly, the inescapable conclusion is that the current opposition to determining minimum population levels of Bobcats reflects nothing more than a conscientious effort to avoid U.S. Treaty requirements. While one may have trouble comprehending the rationale of the IAFWA for undermining species' protection and the CITES Treaty,it is not at all difficult to understand why the fur and trapping interests are attempting to do so.

Finally, the court-established requirement for population estimates is being portrayed by the special interests which seek to prevent proper implementation of CITES for the Bobcat as a standard that will be used to challenge harvesting of other species under a myriad of domestic laws. This argument is also spurious. CITES is an international treaty with its own particular requirements and legislative history. CITES requirements only apply to animals and plants protected under CITES by inclusion in its appendices. Moreover, the judicial requirements for Bobcat export are based squarely on the particular CITES language.

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[1] Wildlife Management Techniques Manual. 1980, 4th edition. The Wildlife Society: Washington, D.C.,p. 221

3. Any amendment to the Endangered Species Act that alters U.S. obligations under CITES would harm wildlife and this nation's international reputation.

Amendment of the Endangered Species Act to undermine CITES would have serious negative ramifications. First, such an amendment would mean the significant loss of legitimate protection from harmful levels of international trade for the American Bobcat and other domestic species now listed on CITES Appendix II (Lynx and River Otter) and those listed in the future.

Second, such amendment is likely to set a dangerous precedent; namely, that impartial judicial interpretation of U.S. obligations under international agreements can be negated by special interest groups through domestic legislation secured by applying political pressure. If the U.S. desires to alter the standards of the CITES Treaty for wildlife protection,it should do so through the proper forum, the regular meetings of the 73 nation-members to CITES.

Third, unilateral weakening of the Treaty's protective standards by the U.S. over a controversial domestic species would seriously undermine the CITES Treaty and U.S. credibility. The U.S. has pushed strongly to bring about the protection of non-native species such as the endangered cats (cheetah, leopard, ocelot and jaguar) in their countries of origin and through control of international trade. Failure to comply in good faith with CITES for the domestic Bobcat will certainly be perceived as a double-standard for wildlife protection. Such action on the part of this nation, a primary drafter and negotiator of the "Washington Convention" and until recently a strong proponent of species' protection, will undoubtedly undermine the Treaty's success in controlling international trade in listed species.

CONCLUSION

The U.S. Court rulings concerning bobcat protection under CITES, far from being the travesty which some have suggested, simply represent proper interpretations of U.S. obligations under the Treaty.

And, as we have shown, the standards set by the Treaty and interpreted by the Court of Appeals do not present an impossible burden to the Federal Government or the state fish and wildlife agencies. Indeed, as early as the settlement discussions which began in May of 1981, Defenders of Wildlife proposed an outline of guidelines which would have allowed pelt export from most states and still satisfied the CITES requirements. The Federal Government and the International Association of Fish and Wildlife Agencies refused to negotiate and the settlement discussions broke down. In September 1981 when the

Fish and Wildlife Service proposed export findings which failed to comply with CITES, Defenders again proposed guidelines which would allow bobcat export, while meeting the standards of CITES. Again, the Fish and Wildlife Service refused to comply, apparently hoping that the U.S. Congress would simply alter our treaty obligations.

In fact, since February 3, 1981, when the Court of Appeals ruled neither the Fish and Wildlife Service nor the International Association of Fish and Wildlife Agencies have taken even a single good faith step toward complying with the mandate of CITES and the Court of Appeals ruling.

Now these same agencies and interests have come to Congress to ask for "relief" from the consequences of their own failure to take positive action. The travesty would occur if Congress were now to provide a legislative "fix" and back away from our international responsibilities.

We urge the Congress, therefore, to reject any amendment to the Endangered Species Act which would alter our international or national obligations under CITES, and to reaffirm that it, as well as the courts, expects this nation to comply fully with these obligations.

NATIONAL AGRICULTURAL CHEMICALS ASSOCIATION
THE MADISON BUILDING
1155 Fifteenth Street, N.W., Washington, D. C. 20005
202 • 296-1585 Cable NAGRCHEM

Dr. Jack D. Early
President

January 8, 1982

Senator John H. Chafee
Chairman, Environmental Pollution Subcommittee
Environment & Public Works Committee
4204 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Senator Chafee:

Attached is our statement submitted for the record of the hearings held December 8 and 10, 1981 on the Endangered Species Act.

We appreciate the privilege of presenting this material for the record and look forward to the possibility of testifying at the ESA hearings later this year.

Sincerely,

Jack D. Early

JDE:lmh
Attachment

STATEMENT
OF THE
NATIONAL AGRICULTURAL CHEMICALS ASSOCIATION
SUBMITTED FOR THE OVERSIGHT HEARINGS OF THE ENDANGERED SPECIES ACT
BEFORE THE
SUBCOMMITTEE ON ENVIRONMENTAL POLLUTION OF THE SENATE COMMITTEE ON PUBLIC WORKS AND THE ENVIRONMENT
DECEMBER 8 AND 10, 1981

The National Agricultural Chemicals Association (NACA) is a non profit, trade organization of manufacturers and formulators of pest control products employed in agricultural production. NACA's membership is composed of the companies which produce and sell virtually all of the technical crop protection materials and a large percentage of the formulated products registered for use in the United States.

We understand that early in 1982, hearings will be scheduled to consider reauthorization and possible amendments to the Endangered Species Act (ESA). We look forward to the opportunity to testify at that time. At this time, however, NACA would like to comment on certain areas within the law which, if fully enforced, could threaten American agriculture's ability to feed the people of this country and millions of others in the world.

NACA's recommendations fall into two broad areas: (1) to restructure procedures so as to minimize costly and time-consuming implementation of the Act's provisions that could threaten agricultural production and (2) to re-assert the element of reason into the allocation of critical resources, land and water, that must serve both endangered species and agriculture's vital role in food and fiber production.

We will present our concerns and recommendations in the following seven areas:

1. NEED FOR BETTER DATA
2. REDEFINITION OF CRITICAL HABITAT
3. ECONOMIC LOSS FROM DELAYS
4. COMPENSATION PROVISION
5. SATELLITE LISTS
6. BIOLOGICAL ASSESSMENT
7. 1979 ESA AMENDMENTS

NEED FOR BETTER DATA

We believe that the Endangered Species Act should be administered on the basis of the best scientific and commercial data available. Unfortunately, many species have been listed, and attempted to be listed, where the scientific data have been extremely weak even though they might be the "best" available.

A dramatic example of this situation was the proposed listing of the Illinois Mud Turtle in the Federal Register issues of July 6, 1978 and December 7, 1979. Although not always the case, this proposed listing had a potential economic impact on an agricultural chemical plant located in the area where the Mud Turtle resides. After obtaining the data upon which the Fish and Wildlife Service based its justification for endangered listing the affected company financed an independent issue.

We have seen transferral of final listing decisions out of the hands of those competent to make the biological decision as to endangerment and into the hands of the Office of Management and Budget, where deliberations are no longer subject to public scrutiny and there is no opportunity for others to counter misimpressions and errors of fact on the part of economists.

I should like now to comment more fully upon some of the issues mentioned above or included in an announcement from the Fish and Wildlife Service of aspects of the Endangered Species Act identified for examination and possible change.

The announced hierarchy for listing actions and the suggestion that "lower organisms", including plants, be dropped from protection under the Act are, quite simply, biologically indefensible. As set forth by the Administration, vertebrate animals, with mammals and birds at the top, are highest in priority. These have long been covered by the Act and many are therefore already listed. Organisms such as plants, to which coverage has only recently been extended, are at best only eleventh in priority. But it should be remembered that all animals, including humans, are dependent eventually for their livelihood upon plants. Many people have made the point that we depend heavily upon plants for many things--including food, fiber, pharmaceuticals, and the oxygen we breathe. As ecosystem components they serve to inhibit erosion, to purify the air and water, to store the carbon dioxide that is so important in regulating the Earth's climate, to comprise at one time the fossil fuels that we are now so wastefully dependent upon, perhaps as biomass to contribute to the fuels of the future. Yet we are vastly ignorant of the possible useful products in these natural chemical factories.

The dependence of modern antibiotics upon chemicals discovered in humble fungi is well known. It has been estimated that half the prescriptions written annually in the United States contain a drug of natural origin. Of the 76 major pharmaceutical compounds derived from just higher plants, only seven can now be synthesized at competitive prices. New discoveries of potentially great practical significance appear not infrequently in the media.

I emphasize plants because I have spent the bulk of my time in recent years working in their behalf. But animals, too, and "lower" ones, can afford study involving the expenditure of over a half million dollars. The Fish and Wildlife Service convened a scientific panel to examine the company study, which included research by an independent research firm. The panel, selected from a list suggested by the National Academy of Sciences, concluded that the Fish and Wildlife data "was weak in the adequacy of the survey procedures and design," and that the company study "was considered adequate and comprehensive." Faced with such analysis, the proposed listing was withdrawn.

The Mud Turtle situation is one case where a company had an opportunity and the ability to contest the justification for the proposed listing. Unfortunately, in many cases the affected parties do not have the resources to question such listings and to conduct their own review of the scientific data. If the Mud Turtle situation had involved the protection of a major crop, rather than the operation of a manufacturing facility, then the consequences may have had a more far-reaching effect.

Recommendation

We would urge Congress to stress the need for listings to be truly based upon adequate current field surveys which determine population levels, present distribution and critical habitat designation, if required. The Management/Recovery Program and its economic impact should be available for peer and public studies before final listing rule is issued.

REDEFINE "CRITICAL HABITAT"

Of prime importance is the need to redefine "critical habitat" and the circumstances under which endangered species can be re-introduced into an area. For example, fisheries management over the years have acquired an astonishing capability to rebuild declining populations of game fish, support sustained yield under annual fishing pressure, and stock new water bodies from hatchery-reared programs. This technology is now being put to use in endangered fish recovery programs with considerable success. But reintroduced endangered fish have "habitat priority" and may strictly limit uses of water, including that of agricultural irrigation.

Similarly, the recent breakthrough in captive breeding of raptors, (eagles, falcons) and the highly effective foster-rearing of these birds in the wild, have resulted in supplying annually for introduction into the wild almost as many fledged young Peregrine falcons as pre-disturbed wild populations are estimated to have produced. Precisely where each pair will establish a breeding territory is not a completely controllable factor.

It is important to note that the spread of endangered species into areas not occupied at the time of listing cannot be confined to Federal and State owned lands, nor to water habitats not already committed in support of the economy. In fact, endangered wildlife can be attracted to many modifications man has made in the environment, such as manatees to warm water discharges of electric power plants, or bald eagles to open water tailrace of dams. There, unless ESA recovery programs employ methods other than site-priority, costly economic impacts can be expected.

Recommendation

In regard to endangered wildlife and plants established in areas long vacant of the species, habitat priority should not apply. An approved, published Management/Recovery Program which includes cost/benefit analysis, should help considerably to resolve present inequities.

ECONOMIC LOSS FROM DELAYS

A number of legal actions have been brought under the Act, to address regulations and definitions. In addition, the Act allows that "any person may commence a civil suit against any person or the United States who is allegedly in violation of any provision of the Act." The law clearly provides that the court may award costs of litigation, including reasonable attorney and expert witness fees, to any plaintiff whenever the court determines such an award is appropriate. In many cases these private actions are brought on an irresponsible basis and the defendant suffers heavy losses while the action is being litigated. For example, Basin Electric had invested some $444 million in the Grey Rocks Power Plant in Wyoming before a court suit based upon an endangered species located approximately two hundred and seventy miles downstream temporarily stopped construction. The interest on the construction loan amounted to $140,000 per day, or fifty million dollars per year. Faced with threatened delaying tactics, the company established a $7.5 million trust fund to be used for purchasing endangered species habitat and their management. The lawsuit was settled because the company was faced with tremendous liabilities, and nothing was settled on the merits.

Recommendation

NACA suggests that the moving party should be required to post a bond sufficient to cover the cost of the delay in project construction if the plaintiff should not prevail or fail to make his case.

COMPENSATION PROVISION

Another concern with the Act is the lack of any provision for loss of property or compensation for income lost whenever protection of an endangered species has led to destruction of a person's property or livelihood. For example, when the endangered Gray Wolf ranged outside the U.S. Forest Service wilderness area in Minnesota and preyed upon a dairy farmer's livestock, that owner was restricted by the ESA from defending his property other than calling for the state game warden to come and live-trap and remove offending individual wolves - a time-consuming solution, costly to both the impacted landowner and the state. No compensation for livestock losses was provided.

Recommendation

Make provision to compensate injured parties for damages resulting from administration of the ESA.

SATELLITE LISTS

The 1978 ESA amendments added a new category for protection, "proposed for listing" which added species in numbers far exceeding those on the official endangered and threatened list. Also, the ESA has 'cloned' to 38 states that have, or are in the process of preparing, their own "State Lists" that commonly include species that are not endangered nationally but are rare or peripheral to that particular State. Further, the Department of Interior and other Federal agencies have funded projects enabling Native Plant Societies at the State level to prepare 'endangered' plant lists based primarily on herbarium records . For example, such a cooperative study, "Rare and Endangered Vascular Plant Species in West Virginia" (Apr. 1981) turned up 360 plant species divided into the following categories: (1) vulnerable, (2) rare, (3) local, (4) single West Virginia station, (5) restricted range, and (6) peripheral.

Our two largest Federal land management agencies, the Bureau of Land Management and the U.S. Forest Service, under their own authority are establishing a "sensitive species" list on a state by state basis. This list may include proposed species, candidate species, experimental species, plus species from State and Society lists that their staffs judge should be protected to prevent their reaching a status where they would be endangered or threatened.

This complex of lists involving thousands of species not directly covered by the Endangered Species Act is nevertheless, a very troublesome problem for agriculture. In practice such species cannot be ignored in planning any food or fiber production. These sensitive species stand in the wings ready to go on stage at the call of any private party wishing to delay or cancel a project or agricultural crop for which they have objection of any nature.

Recommendation

We feel that the array of species peripheral to the Act should not be binding on any Federal Agency, or a petitioner for a permit, license or easement, until they have met and been awarded endangerment status.

BIOLOGICAL ASSESSMENT

One of the potential problems that faces the agricultural chemicals industry in Section 7(c) concerns biological assessment, which is intended to be completed within one hundred and eighty days. However, when consultation is necessary, an additional ninety days can be granted for review. Consequently, nine months can elapse before a judgement can be made.

Such delays could cause irreversible harm to agriculture. Crop plant diseases such as southern corn blight often strike with but a few days warning and spread rapidly if controls cannot be applied immediately. Grasshopper control programs on western range lands have normally but three (3) weeks from the time when late spring survival of disastrous numbers of immature grasshoppers is ascertained and the time spray-planes must be airborne. There would be no time to make a biological assessment for endangered species, if the crop is to be saved.

Recommendation

The delays occasioned by the necessity to perform a biological assessment before pest control programs can be mounted must not be imposed on agriculture or public health programs. Specific exemptions should be incorporated in Section 7 of the Act to accommodate any time-critical agricultural or public health operations.

1979 AMENDMENTS

In 1979, the Act was amended to establish an Endangered Species Committee to provide exemptions from the "mandates" of the Act, as interpreted by the U.S. Supreme Court in the Tellico Dam case. Although this was a step in the right direction, several questions arose with that 1979 amendment.

First, there is a question whether or not the present membership of the Committee should have the authority to designate members within their respective agencies to serve, realizing the enormity of their respective Presidential Cabinet responsibilities.

Second, there is a question whether the time for the Committee to review applications for exemptions is excessive.

Third, it is questionable whether the 1979 amendment changed the language in Section 7 of the ESA to completely modify the U.S. Supreme Court interpretation that the Act has priority over the primary missions of Federal agencies, "whatever the cost." In that amendment, the phrase: "do not jeopardize the continued existence of...endangered and threatened species or result in the destruction or adverse modification of habitat of such species..." was changed to read: "not likely to jeopardize...".

Recommendation

Section 7(a) (2) should be modified further to permit more flexibility and discretion by stating that:

> Each Federal Agency shall, in consultation with and with the assistance of the Secretary, in so far as practical and consistent with their primary objective, insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize...
> (Added language emphasized.)

CONCLUSION

Dr. Norman E. Borlaug, who received the Nobel Prize for Peace for his outstanding contribution to alleviation of world hunger through the development of improved wheat varieties warns that food production must double by the year 2030 to feed a world population of eight billion. "We can't feed the world with old technology. And we can't feed it without insecticides, fungicides, herbicides, and good machinery," says Borlaug.

The National Agricultural Chemicals Association feels that there is a genuine cause to balance the need to protect endangered species with the need to increase food production lest humans become an endangered species.

We applaud the Subcommittee for undertaking a review of the Act and its workability. The National Agricultural Chemicals Association appreciates the opportunity to submit this statement. We look forward to reviewing specific draft legislation and pledge our assistance and cooperation in developing sound and meaningful changes in the Act.

Dr. Jack D. Early
President
NACA

National Forest Products Association

John F. Hall
Vice President,
Resources

Forest Industries Building • 1619 Massachusetts Avenue, N.W.
Washington, D.C. 20036 • 202/797-5858

December 29, 1981

The Honorable John H. Chafee
United States Senate
Washington, D.C. 20510

Dear Senator Chafee:

Thank you for giving us this opportunity to present the National Forest Products Association's concerns with the Endangered Species Act and its implementation and our suggestions for improvement.

NFPA, headquartered in Washington, D.C., is a federation of 31 forest industry associations in addition to direct company members. Through its membership, it represents more than 2,500 companies throughout the United States and Canada engaged in timber growing, and in the manufacture and distribution of forest products.

The Endangered Species Act was enacted as an effort to insure our nation's plant and animal resources would be protected from extinction. We support this goal. However, we are concerned that implementation of the Act has tended to neglect or unnecessarily override other important national goals, such as resource productivity, econimic growth and higher levels of employment. Too little attention has been given to the process of balancing these several goals.

We agree with the concept that plants and animals should be protected from extinction that results from heedless acts of man. However, we are concerned with aspects of the current Act and its implementation and with the apportionment of the costs of protecting species and their habitats, especially as this applies to the private sector.

Areas of particular concern to us include: (1) definitions of terms such as "critical habitat", "endangered species", "threatened species", "species", and "take"; (2) the linkage between biological findings of fact and decision-making; and (3) the uncompensated costs for protecting species and habitats borne by only a selected group of private persons.

Other concerns also are indicated and addressed in the attachment "Suggested Changes in the Endangered Species Act".

A. Statutory Problems

1. Definitions - We believe several important terms need to be redefined to clarify Congressional intent and to reduce confusion.

   a. Critical Habitat - As currently interpreted by the Fish and Wildlife Service, the term seems almost to cover the universe. However, when Congress first developed this definition, the emphasis was on discrete elements or sites within the habitat which required special management and protection. We suggest the definition be reworded and report language prepared to insure that implementation of the Act will be given this same emphasis.

   b. Species - At present, the term "species" is used to denote groups as varied as local populations which may be only a small part of a wider ranging species, to "full" species. This is confusing. We suggest that the term be given its biological meaning, or be dropped entirely, using the definitions of "endangered species" and "threatened species" to allow listing of subspecific taxa when appropriate.

   c. "Endangered Species" and "Threatened Species" - These definitions appear to be the logical places to provide for listing of subspecific taxa under appropriate conditions. Although many have complained about the listing of subspecies, varieties or populations, we believe the ability to list such taxa can provide a very necessary degree of flexibility if used properly. We do not think it necessary or wise to list at the specific level unless the entire species is endangered or threatened. However, we believe listing below the specific level should be restricted to those instances where failure to list subspecific taxa would result in listing of the species over its entire range. We suggest these definitions be changed to allow such subspecific listing.

   d. "Taking" - When Congress developed the Act in 1973, two major causes for extinction were recognized. The first was the removal or reduction to possession of animals from a population. The second was elimination of populations through adverse modification or destruction of habitat. Although bills were considered which would have combined resolution of both causes, i.e., by defining habitat modification or destruction as a form of "taking", the final decision was to separate the approaches. Reduction to possession or removal of animals was to be resolved by outright prohibition of such activities. Elimination of populations through habitat modification or destruction was to be resolved by authorizing purchases of threatened habitats. We are in substantial agreement with this approach. However, we recommend the definition of "take" be changed to insure adherence to this concept by the implementing agencies. In addition we recommend changes in the language authorizing acquisition to insure that the relatively small amount of money available for purchasing habitats for listed species be those designated critical habitats most seriously threatened with modification or destruction.

2. Linking of Biological Findings of Fact and Decision-Making - We believe interpretation and implementation of past and current language in Section 7 of the Act has led to much of the outcry for change. The perception, and hence generally the result, has been that the Act requires all actions in conflict with listed species or critical habitat be resolved totally in favor of the species or habitat. Whether the perception is correct or not is immaterial - decisions to do or not do are predicated by the perception.

We do not believe past or current language in Section 7 is necessary to protect endangered or threatened species from extinction. We have asked how many and which species would have become extinct if the standard in Section 7 for federal action agencies were to safeguard listed species and their critical habitats to the extent practicable and consistent with the agencies' preliminary missions and mandates, without an answer.

We suggest a system be provided for assuring that decision-makers have the necessary information on the effects of proposed actions on listed species, that the information be a part of the required process for selection among alternatives and that the decision-makers then be allowed to make decisions.

B. Apportionment of Costs

1. Uncompensated Costs

Often overlooked in discussions of protecting endangered and threatened species are the costs of such protection. Some of those costs can be quantified, others are difficult to assign. Often unaccounted for are those costs associated with unconscious decisions not to take an action or to postpone or shift an action because of possible complications rising from listed species or habitats. There is also the chilling effect which results in conscious decisions to alter or fail to undertake activities because of possible complications.

Other costs, including opportunity costs, are easier to quantify. Companies from our industry can offer several examples.

1. Bald Eagle - One company has 80 nests within 41 nest sites, on its properties in two states. Size of sites range from 3 to 40 acres of mature to old-growth timber. The total is 900 acres of unharvestable timber with a minimum value of $9 million. Other costs include the value of each year's added growth (which may not be realized in stagnant or declining old-growth but would be in younger vigorous managed stands) and management and operational costs, including modified logging in adjacent blocks and scheduling of harvests to coordinate with the species' biological patterns.

2. Red Cockaded Woodpecker - One company has 22 colonies for which it has set aside 155 acres of timber which can be valued at $115,000 in current appraised values. The other costs cited above pertain in this case also. Another company has modeled costs and returns on a management scheme which would protect the woodpecker while also producing timber. The costs of the model management plan as compared to normal timber management ranged from $2,862 to $4,989 per bird per year. Costs per acre per year ranged $86 to $150 depending on site quality.

The sources of these specific cost figures are attached.

Other costs include those due to delay in implementing activities because of alleged endangered species concerns. For example, the appeal of the decision to build in the Jersey Jack Road on the Nezperce National Forest is based in part on alleged violations of the Act. Some information suggests that only one witness has ever seen the species cited in the appeal in this area. Delay so far has affected a $1.2 million appropriation for construction, with its associated employment and other economic benefits. The environmental assessment and notice of the decision for the Soda-Point Four Mile area of the Nezperce National Forest has been appealed, again on the assumption there may be endangered species in the area. An indication of the impact of such delays is given by the fact that mills in the area employ 500-600 loggers and millworkers and indirectly provide employment for another 1,000-1,200 people.

We believe these data indicate that many of the costs of protecting listed species and their habitats are inequitably distributed. Given that Congress has found that the continued existence of such species is of paramount concern and value to all of the people of the United States, we wonder why the costs are not being borne by all the people. To achieve a better balance in the distribution of costs, we suggest the development of a program for compensating losses and costs.

Many people feel the Act does not need to be amended, that it is working well. We disagree. We believe the continuing controversy is indicative of dissatisfaction with the way we have been trying to achieve a laudable goal - preventing needless losses of our plant and animal heritage. The controversy and dissatisfaction will grow as more species and habitats are listed unless measures are taken to resolve the widespread concerns felt over the way protection of such species is affecting our ability to provide all of the things which contribute to a high quality of life.

Our staff is prepared to work with you and with other groups in efforts to reach the goal of protecting our plant and animal resources with minimum disruption to our ability to achieve all of the other goals we have set for ourselves as a nation.

Sincerely,

John F. Hall

John F. Hall

Suggested Changes in The Endangered Species Act of 1973, as Amended

1. Section 2(a)(1) is amended by striking in its entirety and substituting the following.

"2(a)(1) Various species of animals and plants in the United States have become extinct or been in danger of or threatened with extinction as a result of natural changes in the environment as well as those changes which result from economic growth and development;"

Comment: No matter what the cause, a species is in danger of or threatened with extinction when its numbers reach a certain lower level. There is no reason for separating § 2(a)(1) and (2).

2. Section 2(a)(2) is amended by deletion.

Comment: See 1 above.

3. Section 2(a) is further amended by renumbering 2(a)(3) - 2(a)(5) as 2(a)(2) - 2(a)(4).

Comment: Technical and conforming.

4. Section 2(b) is amended by striking in its entirety and substituting the following:

"2(b) Purposes - The purposes of this Act are to provide a program for the conservation of such endangered species and threatened species, including conservation of the ecosystems upon which these species depend, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in subsection (a) of this section."

Comment: This wording emphasizes that what is needed is a several-pronged program, one part of which is protection of ecosystems.

5. The first clause of section 3 is amended by inserting after the word "Act, the following:

"and any regulations to implement this Act"

Comment: Does away with the tendency by some agencies to restate, or in some cases reword or expand, statutory definitions in implementing regulations.

6. Section 3(1) is amended by deletion.

Comment: No longer germane (see 39 below).

7. Section 3(3) is amended by striking "all" in the first sentence and substituting "prudent and feasible"; and by striking ",in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include"

Comment: It is highly improbable that "all" methods and procedures would ever be considered, let alone used; "prudent and feasible" is a more realistic standard; and there is no logical reason to separate regulated harvest from other conservation techniques for such special treatment.

8. 3(5)(A)(i) is amended by striking "areas" and substituting "sites"; and in clause (II) by striking "may"

Comment: The emphasis should be on specific, readily identified, discrete elements, not on general locales. Clause (II) was intended to be one part of a two-part test for determining whether or not a specific site, with its associated physical and biological features, is to be designated as critical habitat, therefore the use of the discretionary "may" is inappropriate.

9. Section 3(5)(A)(ii) is amended by striking "for the conservation of the species" and substituting "if the species' numbers are to increase to such levels that the species is no longer endangered or threatened"

Comment: The emphasis should be on recovery, the recommended language reflects that emphasis.

10. Section 3(6) is amended by striking all after "range" and by adding the following "; the Secretary may consider a lower taxon an endangered species for the purposes of the Act if it can be shown that the entire species over its entire range would otherwise be listed but that only a portion of it needs the protection afforded by this Act."

Comment: The current language is meaningless since by the time an insect species reached such depleted numbers as to be considered threatened with or in danger of extinction, it would no longer be an overwhelming and overriding risk to man.

This language would permit listing of taxa below the level of the species if there is a high degree of probability the entire species does not require the kind of protection afforded by the Act. It would prevent the wholesale listing of subspecific entities absent a showing of probable listing at the species level.

11. Section 3(8) is amended by striking ", including without...invertebrate,"

Comment The independent clause is all-inclusive, the remaining language is superfluous.

12. Section 3(11) is amended by deleting present language and substituting:

"the term "introduced population" means any population, whether derived from captive-bred or translocated wild individuals, of a species listed under the Act, introduced into an area for the purpose of extending the species' range beyond those specific areas inhabited at the time of listing. Such introduction will be taken to mean the species did not inhabit the area of introduction at the time of listing. Such populations shall not be listed as endangered or threatened."

Comment. Present language is no longer germane (see 39 below). At present there is reluctance on the part of land managers to allow release of endangered or threatened species on lands for which they are responsible because of the possible restrictions on practices which would be permitted subsequent to a release. The proposed definition would help alleviate such concerns.

13. Section 3(12) is amended by deletion.

Comment: No longer germane (see 39 below)

14. Section 3(16) is amended by striking in its entirety and substituting the following.

"3(16) the term "species" means a group of physically similar organisms capable of interbreeding but generally incapable of producing fertile offspring through breeding with organisms outside this group."

Comment: The current definition is biologicaly meaningless. If there is need to provide for listing at taxonomic levels below the species, this could be done by appropriate amendment of the definitions for "endangered species" and "threatened species."

15. Section 3(17) is amended by deletion.

Comment This definition is superfluous (see 18 below)

16. Section 3(19) is amended by striking in its entirety and substituting the following:

"3(19) the term "take" means pursue, hunt, shoot, wound, kill, trap, or collect, or to attempt to engage in any such conduct, for the purpose of removing an animal or plant or reducing it to possession."

Comment: To most biologists, the term "take" as used in connection with wildlife, means to remove or reduce to possession. The term "harrass" does not belong in the definition; if harassment is to be prohibited, it should be considered separately. The term "harm", as it is defined at 50 CFR 17.3, is covered by use of the words "wound" and "kill".

The word "plant" is included since it is possible to remove or reduce plants to possession. It is not intended that the taking of plants be a prohibited act under the Act. However, federal agencies, under the requirements of section 7 of the Act, may need to prohibit taking of plants pursuant to a federal action.

17. Section 3(20) is amended by inserting before the "." the following: "; the Secretary may consider a lower taxon a threatened species for the purposes of this Act if it can be shown that the entire species over its entire range would otherwise be listed but that only a portion of it needs the protection afforded by this Act"

Comment: See comment at 10 above.

18. Section 3(21) is amended by striking in its entirety and substituting the following:

"3(21) the term "United States," when used in a geographical context, includes all states, possessions and territories."

Comment: Does away with any need to enumerate and makes 3(17) superfluous.

19. Section 3 is further amended by renumbering as follows: 3(2) as 3(1) 3(10) as 3(9); 3(13) - 3(16) as 3(10) - 3(13); 3(18) - 3(21) as 3(14) - 3(19) and substitution as required in the remainder of the Act.

Comment: Technical and conforming.

20. Section 4(a)(1)(1) is amended by inserting after the word "range", the following: "due to human activities"

Comment: Places the emphasis on man's activities rather than attempting to cover natural agencies which might have such effects.

21. Section 4(a)(1)(3) is amended by substituting a "," for the word "or" and after the word "predation, adding the following: "or other natural factors"

Comment: Places all natural factors affecting species in the same subsection.

22. Section 4(a)(1)(5) is amended by striking in its entirety and substituting the following.

"4(a)(1)(5) other manmade factors."

Comment	Natural factors considered at section 4(a)(1)(3).

23. Section 4(a)(2)(A) is amended by inserting, after 4(a)(2)(B)(ii), current sections 4(a)(2)(B)(i) and 4(a)(2)(B)(ii) as sections 4(a)(2)(A)(iii) and 4(a)(2)(A)(iv); and by deleting "list such... section" and substituting "implement such action"

Comment:	Technical.

24. Section 4(a)(2)(B) is amended by deletion.

Comment:	Technical (see 23 above)

25. Section 4(a)(2)(C) is amended by renumbering as "4(a)(2)(B)".

Comment:	Technical and conforming.

26. Section 4(b)(2) is amended by inserting after the first "any" the word "foreign"; and after "protection", inserting "or managment"

Comment:	Technical.

27. Section 4(d) is amended by adding after "... such species" and before "." of first sentence, the phrase "with an emphasis on

those which encourage research on interactions of management and population effects."

Comment Emphasizes the importance of and need for management-oriented research which will lead to recovery of listed species.

28. Section 4(e) is amended by inserting after the word "Act", the clause "provided that all procedures in subsections (b), and (f) of this section have been followed, just as though the species were to be listed as threatened or endangered"

Comment: Insures that procedural requirements necessary for listing endangered and threatened species are followed for these species as well.

29. Section 4(e)(A) is amended by striking "at the point in question,"; after first "that", inserting "at designated ports or within the areas where the listed and unlisted species coexist,"; after the ";", adding "and"

Comment: Clearly establishes those situations where similarity of appearance could be a problem.

30. Section 4(e)(B) is amended by striking the word "and"

Comment: Technical.

31. Section 4(e)(C) is amended by deletion.

Comment: Superfluous

32. Section 4(f)(2)(B)(i)(II) is amended by striking in its entirety and substituting the following:

"4(f)(2)(B)(i)(II) A general notice of the regulation, including a summary of the text and a map of any proposed critical habitat, in a newspaper of general circulation in or adjacent to the occupied range of the species or the proposed critical habitat;"

Comment: Provides better public notice for regulations not involving critical habitat.

33. Section 5(a) is amended by striking in its entirety and substituting the following:

"5(a) Program. - The Secretary, and the Secretary of Agriculture with respect to the National Forest System, shall establish and implement a program to conserve those endangered species and threatened species listed pursuant to section 4 or this Act. To carry out such a program, the appropriate Secretary -

(1) shall utilize the land acquisition authority

under the Fish and Wildlife Coordination Act, as amended, and the Migratory Bird Conservation Act, as appropriate, in acquiring designated critical habitats;

(2) is authorized to accept donations, gifts or other voluntary offerings of lands, waters, or interest therein;

(3) is authorized to acquire by purchase from willing sellers, lands, waters or interests therein, which are within designated critical habitats, and such authority shall be in addition to any other land acquisition authority vested in him."

Comment: Places emphasis on acquisition of critical habitat which, given relative scarcity of funds for acquisition, should be the first priority in a habitat acquisition program for listed species.

34. The first sentence of Section 6(b) is amended by inserting "federal" between "any" and "area."

Comment: States do not need to enter a management agreement to manage non-federal lands.

35. Section 6(c) is amended by striking in its entirety and substituting the following:

"6(c)(1) In furtherance of the purposes of this Act, the Secretary is authorized to enter into a cooperative agreement with any state whose program for the conservation of endangered species and threatened species of fish, wildlife and plants meet the standards in (A)-(C) of this section. Within 120 days after the Secretary receives a certified copy of such a state program, he shall determine if it meets the standards below. If he determines the program meets these standards, he shall enter into a cooperative agreement with the state for the purpose of assisting in implementation of the state program. A state program will be deemed to meet the standards if --

(A) Authority rests in a state agency to conserve species determined by the agency or the Secretary to be endangered or threatened;

(B) The state agency has a program for conserving those species which the agency or the Secretary have determined to be endangered of threatened and which the agency and the Secretary agree are most urgently in need of such a program;

(C) The state agency is authorized to undertake those activities associated with scientific resources management.

If the Secretary determines the program does not meet these standards, he shall notify the state in writing of this determination, including the reasons for reaching such determination.

6(c)(2) The applicability of prohibitions set forth in or authorized pursuant to section 4(d) or section 9(a)(1) or section 9(a)(2) shall not apply to those resident species covered by such a state program."

Comment: Streamlines the cumbersome procedures in current regulations which unnecessarily separate wildlife and plants.

36. Section 6(d)(1)(D) is amended by striking in its entirety and substituting the following:

"6(d)(1)(D) The potential for and the desirability and economic feasibility of restoring endangered species and threatened species within a state; and"

Comment: There will be species whose recovery is not desired at all places where they might be restored.

37. Section 6(d)(2)(C) is amended by striking in its entirety and substituting the following:

"6(d)(2)(C) The estimated direct costs and the specific anticipated economic impacts of these actions; and"

Comment: Direct and indirect costs and impacts should be clearly separated.

38. Amend Section 6(g) by deletion.

Comment: No longer germane.

39. Section 7 is amended by striking in its entirety and substituting the following:

"7(a) Federal Agency Programs. - The Secretary shall, when appropriate, utilize programs administered by him in furtherance of the purposes of this Act. All other Federal agencies shall, to the extent practicable and consistent with their primary missions and mandates, integrate conservation of species listed pursuant to section 4 of this Act with their programs.

7(b) Federal Agency Actions. - Prior to the conduct of any action to be funded or carried out by a federal agency, hereinafter in this section referred to as action agency, the action agency shall prepare a report to Congress on the probable effects, if any, of the action on any species listed, or proposed to be listed pursuant to section 4 of this Act, *provided* that the issuing of permits or licenses, making of grants, loans or loan guarantees and providing financial or technical assistance shall not be considered federal actions for the purposes of this Act. If a significant effect, as determined by the Secretary, is anticipated, the report to Congress shall include a written statement setting forth the Secretary's opinion which (i) details how the action is expected to affect listed species and their critical habitats, and (ii) presents reasonable and prudent alternatives the agency can take which will avoid or lessen any negative effects of the proposed action on such species and habitats. The agency proposing the action shall indicate in the report the reasons for accepting or rejecting any proposed alternative, including the original action. The Secretary's opinion shall be published in the Federal Register within 10 days after its transmission to the action agency.

7(c) Biological Assessment. - To facilitate compliance with subsection (b), the action agency shall request the Secretary to advise if any listed species, species proposed to be listed, or critical habitats may be present in the area of the action. If the Secretary advises that such species or habitats may be present, the action agency shall conduct a biological assessment to determine the presence of such species or habitats. The assessment shall be completed within 180 days of initiation.

7(d) Consultation. - If the biological assessment indicates the presence of listed species, species proposed to be listed, or critical habitats in the area of the proposed action, the action agency shall notify the Secretary of such presence and of the nature of the proposed action. If the Secretary decides the anticipated effects of the action on such species and habitats are significant, the action agency shall consult with him. The form of and information to be a part of such consultation shall be determined by agreement between the Secretary and the action agency. Consultation shall result in (i) an opinion by the Secretary as required in subsection (b), and (ii) any additional information the action agency may need in reaching decisions to accept or reject alternatives. Consultation shall be concluded within 180 days after initiation.

7(e)(1) Jeopardy. - An action which is likely to (i) jeopardize the continued existence of a species listed pursuant to section 4 of this Act or (ii) result in adverse modification or destruction of designated critical habitat, may be conducted, *provided*, the report required in subsection (b) of this section has been received by Congress.

(2) Incidental or inadvertent takings of listed species pursuant to an action meeting the requirements of subsection (b) of this section shall not be prohibited takings for purposes of this Act.

Comment: This language a) removes the objection that a biological finding of fact (endangerment) would be the sole, or principal, factor halting federal actions, b) puts the decision-making where it belongs - initially with the agency and ultimately with Congress and c) provides a procedure whereby Congress and agencies are assured of having necessary biological information prior to taking final action.

40. Section 8(a) is amended by substituting "may" for "shall" in the second sentence.

Comment: Technical - to conform to first sentence.

41. Section 8A is amended by renumbering as 8(e), and renumbering subsections, paragraphs and clauses as necessary to conform.

Comment. Technical

42. Section 8A(d)(7) - current numbering - is amended by striking in its entirety and substituting the following:

"8(e)(4)(G) In any case in which the Scientific Authority decides not to accept a recommendation made by the Commission under paragraph (E), whether for environmental, economic political or other reasons, the Scientific Authority shall provide the Commission a written explanation of the reasons for that decision."

Comment. Inasmuch as the Commission's recommendation is not published, why publish the Scientific Authority's explanation for not accepting it.

43. Section 8A(d)(8)(A) - current numbering - is amended by striking in its entirety and substituting the following:

"8(e)(4)(H)(i) The Chairman of the Commission, with the agreement of a majority of the Commission, shall appoint a member of his agency to serve, without additional compensation, as Executive Secretary for the Commission. The Executive Secretary serves as such at the pleasure of the Chairman and Commission and shall carry out such functions and duties as may be prescribed by the Commission."

Comment: This would provide for control of the Secretariat by the Commission as well as reduce total costs of administration.

44. Section 9(a)(1) is amended by striking "6(g)(2)" and inserting "6(c)(2)"

Comment: Technical and conforming.

45. Section 9(a)(2) is amended by striking "6(g)(2)" and inserting "6(c)(2)"

Comment: Technical and conforming

46. Section 9(b)(1) is amended by striking all after ";" and insert "."

Comment Unnecessary constraint which has operated to the detriment of such species as Psittacines.

It is the responsibility of the accusor to prove that the accused has committed a prohibited act, not that of the accused to prove he didn't.

47. Section 9(c)(1) is amended by striking "." and adding ", *Provided* that possession of specimens acquired before ratification of the convention or before placement on an appropriate Appendix to the Convention, whichever is later, is not prohibited."

Comment: Grandfather Clause.

48. Section 9(c)(2) is amended by deletion.

Comment Superfluous.

49. Section 10(a) is amended by adding at the end of thereof, "The Secretary shall issue any necessary permits, for research on managment for enhancement of species and critical habitats listed pursuant to this Act, provided such a permit would not likely result in extinction of the listed species."

Comment: This emphasizes the need for managment-oriented research.

50. Section 10(b)(1) is amended by striking "notice of consideration of" and inserting "a proposal to list" whenever the former appears.

Comment: The only procedural steps recognized for purposes of a rulemaking, including a regulation listing a species under the Act, are proposed and final rulemakings. The stricken term is too vague to serve as a procedural signpost.

51. Section 10 (b)(2) is amended by striking "notice of consideration of" and inserting "a proposal to list" whenever the former appears.

Comment: See 50 above

52. Section 11 (a)(1) is amended by striking ", any person engaged in business as an importer or exporter of fish, wildlife or plants who violates," wherever it appears.

Comments: There is no substantive reason for singling out this class -which is undefined in the statute and hence subject to varying interpretation as to who is included - for purposes of holding to a higher standard of liability.

53. Section 11(b)(1) is amended by striking "knowingly" and inserting "willfully" wherever it appears.

Comment: There should be higher standards of liability for a criminal violation than a civil one, yet such is not presently the case.

54. Section 11(g)(4) is amended, after the parenthetical insertation, by striking "any" and inserting "the prevailing"

Comment. As currently written, the court could award costs to the losing party.

55. Section 12 is amended by striking in its entirety and substituting the following:

"Compensation for Financial Losses"

"12(a) The Secretary is authorized to compensate persons for financial loss when he determines such persons have suffered financial losses directly caused by requirements or prohibitions of this Act or of regulations promulgated pursuant to authority provided by this Act when such requirments or prohibitions create conditions whereby a person (i) must manage lands owned by him in a manner which eliminates financial gain which would otherwise accrue if such land were managed in the absence of such requirements or prohibitions or (ii) is prevented from taking an animal or plant which is causing him economic damage.

(b) The Secretary shall issue such regulations as may be necessary to implement this section, including those which (i) prescribe the manner and form for applying for compensation; and (ii) describe the evidence required to substantiate the claim that loss was due to conditions described in subsection (a) of this section.

(c) The Secretary shall make the determinations required by this section within 60 days after receipt of an application filed in accordance with subsection (b)(i) of this section.

(d) The amount of compensation paid, pursuant to this section shall be equal to the economic gain foregone or loss sustained.

(e) Compensation shall not be paid under this section unless application for such compensation is made (i) within one year after final regulations are issued pursuant to subsection (b)(i) of this section, (ii) within one year after final regulations are issued by the Secretary which establish requirements or prohibitions alleged to cause losses or (iii) within one year after being prohibited, pursuant to the Act, from undertaking an action whose prohibition is alleged to cause losses.

(f) The Secretary's determination shall be an agency final action for purposes of judicial review.

(g) Failure to compensate a person whom the Secretary has determined has suffered economic losses under the terms of the section within one year of such determination shall be considered permission for that person to conduct the action causing economic loss without prosecution, injunction or penalty otherwise provided in this Act.

(h) There are authorized to be appropriated such sums as may be necessary to carry out the provisions of this section.

Comment: Current language no longer germane. This new section would establish a procedure whereby a person who is injured because of requirements or prohibitions that might be construed as takings of private property may be compensated for losses.

Statement of the
Natural Resources Defense Council, Environmental Defense Fund, California Native Plant Society, Association of Western Native Plant Societies, New England Wildflower Society, Colorado Native Plant Society, Wyoming Native Plant Society, New Mexico Native Plant Society, Plant Committee of the Texas Organization for Endangered Species, Tennessee Native Plant Society, Meals for Millions, and Waimea Arboretum

Submitted to the Subcommittee on Environmental Pollution
for inclusion in the record of the oversight hearings on the
Endangered Species Act, December 8 and 10, 1981

The organizations listed above endorse the following testimony, which focuses on those aspects of the Endangered Species Act that apply to conservation of endangered and threatened plants. The Endangered Species Act (ESA) is the most important national program intended to conserve wild plant species. While the Act has some weaknesses, principally the lack of a taking prohibition for plants and the general requirement that an economic assessment be prepared for any critical habitat designation, the Act itself authorizes a sound and effective program. However, implementation of the Act has not been adequate, with the result that our rich natural heritage is in great jeopardy.

Plant conservation is a vital component of any natural resource management and conservation program. Plants are the foundation of almost all natural ecosystems. Only plants can convert sunlight (radiant energy), atmospheric carbon dioxide, and water into food which can be used by animals, including ourselves and our livestock. Plants also provide food and shelter to bees and other insects that pollinate our crops as well as birds that prey on agricultural pests. Along with microorganisms, plants are critical to the recycling of vital nutrients such as nitrogen. So important are plants in the web of life that Dr. Peter Raven of the Missouri Botanical Garden estimates that each extirpation of a plant species may cause the extinction of two dozen species of insects, other animals, and other plants. Clearly, conservation of rare plants is essential to maintaining healthy ecosystems.

Many individual species of wild plants have great proven or potential utilitarian value. A quarter of all medical prescriptions sold in the United States contain chemicals derived from vascular plants. Examples include Vincristine and Vinblastine, standard treatments for various cancers, which are extracted from a tropical periwinkle; digitalis and dioxin, used to treat heart and circulatory ailments, which are derived from foxgloves. Organic alkaloids, found in an estimated 20% of all plant species, are particularly valuable in medicine; already in use are painkillers such as cocaine, anti-malarial drugs, cardiac and respiratory stimulants, bloodpressure boosters, muscle relaxants, local anesthetics, and tumor inhibitors. Other plant-derived chemicals show great promise in controlling major diseases. Endod, a compound derived from an Ethiopian plant, may help control the snails that spread bilharzia, a disease affecting 250 million people throughout the tropics. Before the Reagan Administration eliminated the program's funding in FY 1982, the National Cancer Institute screened about 29,000 plant species for chemicals with potential anti-cancer properties. [Norman Myers, *The Sinking Ark*, 1979, Pergamon Press]

The presence or absence of particular plant species has been used to map geological formations, including the location of important water supplies and economically valuable minerals such as copper deposits in Montana. [Helen L. Cannon, "The Use of Plant Indicators in Ground Water Surveys, Geologic Mapping and Mineral Prospecting," *Taxon* 20 (2/3): 227-256, May 1971; Cannon, "Advances in Botanical Methods of Prospecting for Minerals; Part I - Advances in Geobotanical Methods," in Peter J. Hood, editor, *Geophysics and Geochemistry in the Search for Metalic Ores*, Geological Survey of Canada, Economic Geology Report 31, pps. 385-395, 1971]

All our crop plants were originally derived from wild plants, and their wild relatives continue to be extremely important sources of germplasm for crop improvement. Wild germplasm has already made particularly important contributions to sunflower, sugarcane, rice, cotton, tomato, potato, cacao, lupin, and grape. The commercial sunflower has benefited from interspecific crosses with *Helianthus petiolaris* for increased yields and disease resistance (rust, downy mildew, and wilt) as well as genetic characteristics vital to future breeding programs. In fact, *H. petiolaris* hybrids accounted for more than 80% of U.S. sunflower production in the late 1970s. Other crosses with *H. annuus* have also increased yields, while two other species, *H. bolanderi* and *H. rigidus*, are under investigation as sources of increased protein content. Tomato production has also improved greatly from the introduction of wild germplasm. *Lycopersicon peruvianum* is a source of particularly concentrated Vitamin C as well as resistance to nematodes and foliage pests such as *Septoria* leaf spot and tobacco mosaic virus. *L. pimpinellifolium* increases resistance to leaf mold and wilt and, in addition, imparts a more intense red color to the fruit. *Lycopersicon chilense* and *Solanum pennellii* have great potential for increasing the tomato's tolerance of drought; L. cheesmanii may transmit salinity tolerance.

Wild plant germplasm is particularly important as a source of genetic resistance to disease and pests. We have already cited as examples certain sunflower and tomato relatives. In addition, wild races of wheat have been the source of resistance to several important rust diseases. Cotton has been made less vulnerable to root knot nematode by crossing it with the wild Gossypium barbadense and G. hirsutum, while G. armourianum has provided resistance to boll weevils, leafworms, and bollworms. Corn has also benefitted from crosses with wild relatives. Resistance to northern leaf blight has been transferred from Tripsacum floridanum, considered to be endangered. Zea diploperennis, another endangered wild corn discovered in Mexico as recently as 1978, may convey resistance to fungal infections such as that which destroyed 15% of U.S. production in 1971.

An alarming number of these important wild relatives of crop plants are endangered or declining, due usually to habitat loss. In addition to the two corn relatives just mentioned, and a third, Zea mexicana, these include the important tomato germplasm source, Lycopersicon peruvianum; three cotton relatives, Gossypium raimondii, G. klotschianum, and G. tomentosum; and several relatives of the sunflower and squashes. [Robert and Christine Prescott-Allen, In Situ Conservation of Crop Genetic Resources, International Union for Conservation of Nature and Natural Resources, Draft for Review, January 1981]

Various other plant products show promise for industrial use. Of course, we already derive rubber, numerous pectins, resins, gums, essential oils for flavors, vegetable dies, and insecticides from plants. Additional sources for these products, and sources for new products, are in various stages of experimentation and development. The jojoba bush, Simmondsia chinensis, native to the deserts of the American Southwest and Mexico, produces an extremely high quality liquid wax in its seeds; commercial crops are already being exploited. The guayule (Parthenium argentatum), from the same region, is a known source of rubber. Experiments are beginning on the possibility of extracting petrochemicals from a hardy native milkweed, Asclepias speciosa. In Brazil, the copaiba tree, Copaifera langsdorfii, produces a sap which can be used instead of diesel fuel.

In addition to their ecological importance and practical utility, plants have been valued through the centuries for their beauty and other fascinating attributes. Many people study wild plants as a career or avocation; their interests range from common wildflowers to extremely rare species. Many others cultivate horticultural varieties that have been derived from wild progenitors. Who would deny the beauty of the fringed orchids of our bogs and wet prairies, the showy McFarlane's four o'clock of Washington State, the Persistant Trillium of the Southeast, or the Antioch Dunes Evening Primrose? The pitcher plant's ingenious insect traps and the cactus' bizarre appearance and threatening spines fascinate us - what odd forms Nature does devise to adapt to challenging environments!

Scientists agree that any conservation program should emphasize protecting the species in their natural habitats. Only *in situ* conservation can assure maintenance of ecological processes vital to man's needs as well as to the survival of the species themselves. Such conservation methods are also required if man is to increase his knowledge of natural processes by the study of the species' chemical and other interactions with its environment and its evolution. Finally, *in situ* techniques enable us to protect species before we have discovered any potential useful attributes, *i.e.*, to assure future options. *Ex situ* programs, such as seed banks or botanical gardens, can supplement but not replace conservation of the plants' habitat.

Despite the benefits of conserving wild plant species, and the widespread appeal of many of them, this entire biological kingdom has not yet achieved equality in our conservation programs. Plants were included in the Endangered Species program in 1973, but at a reduced level of protection compared to rare animals. Consequently, rare and valuable plant species have continued to suffer declines. In 1978 and 1979, the Congress extended to plants three important provisions of the Act: authorization to establish cooperative management agreements with the States, to purchase habitat to conserve rare species, and to assist foreign governments in conserving their rare plant resources. However, the Act still does not allow the listing of geographically separate populations of plant species or regulate the "taking" of listed plant species.

Nevertheless, the Act does promise considerable protection against the major causes of endangerment, habitat destruction and overcollecting. For some plants, cacti, carnivorous plants, some native orchids, and some alpine species, overcollecting for the horticultural trade is an important cause of depletion. Thus, the U.S. Fish and Wildlife Service has already listed 21 species of cacti and is preparing to list another 60-70 species, *i.e.*, over 25% of all cactus species found in the United States. All of these species are threatened in part by overcollecting. While the Endangered Species Act does not restrict taking of listed plants, it does prohibit interstate and foreign commerce in them (§9(2)), and thus should considerably reduce the collecting pressure.

The most important cause of endangerment for plants is loss of suitable habitat, that area that provides the right combination of sunlight, water, temperature, soil nutrients, and associated species of other plants, insects, and other animals for the plant to survive. The Act protects the habitats of listed species in several ways: by requiring that all Federal agencies consult with the Fish and Wildlife Service to assure that their actions are not likely to jeopardize species' continued existence or damage critical habitat, and by requiring that all Federal agencies take positive actions to conserve listed species (§7); by creating cooperative management programs with the States (§6); by authorizing purchase of habitat (§5); and by authorizing technical assistance to foreign governments to conserve their wild plant resources (§8). The Act also authorizes actions to address other causes of plant extinction such as competition or predation by introduced plants or animals.

Unfortunately, the Act's promise has not been fully realized due to lagging implementation. Despite language in §12 authorizing "other affected agencies" to cooperate with the Smithsonian Institution in preparing the initial report on endangered native plants, the Fish and Wildlife Service did not hire its first botanist until that report was nearly completed, in May 1975. Another two years were absorbed in developing general rules to apply to listed plant species. Consequently, the first plant species were placed on the list only in August 1977. The pace of listing improved in 1978-1980, then fell off as the impact of the 1978 amendments to the listing process took effect. To date, only 63 plant species have attained protection under the Act. Not a single marine plant species has ever been studied for listing by the National Marine Fisheries Service.

Utilization of the Act's powers to conserve listed species has also lagged. Only 1 recovery program has been adopted for plant species, compared to 37 for animals; 19 plant recovery plans are currently scheduled for development, compared to 81 for animals. One reserve has been purchased which benefits plants, the Antioch Dunes in California, although even that was justified by the need to conserv the butterflies also present on the site. There has not been a single prosecution of violators of the prohibition on the interstate and foreign sale of listed plants, despite dealers' continuing to advertise protected species and inclusion of such species in lists of plants reported to the Department of Agriculture as exports. Federal enforcement agents have also failed to take advantage of the skills and knowledge of the trade possessed by various State officials, particularly those of Arizona where several of the listed cactus species are found. The Fish and Wildlife Service, which is responsible for regulating interstate trade in listed plants, has trained criminal investigators on its payroll, but has not trained them in plant identification or made clear that moneys appropriated for enforcing the Act are available for investigating plant as well as wildlife trade violations. The Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), which is responsible for controlling plant imports and exports, has still not hired plant taxonomists skilled in identifying listed species, despite the availability of funds since October 1980; nor has it assigned any criminal investigators to this program. FWS and APHIS have also failed to issue jointly regulations required by §9 of the Act to designate ports through which listed plants may be imported and exported, or to license dealers engaged in this trade (§14). Both steps are essential to effective enforcement of trade controls.

One success in implementing the Act has been the State cooperative agreements. In the three years since such agreements were authorized by amendment of the Act, 11 States have signed formal agreements for plant conservation and 8 more have begun the process of negotiating them. Other States have received contracts and other forms of assistance to conserve their rare plants.

In the past year, much of the momentum gradually built up for conservation of rare plants has been lost. Funding for the §6 State Cooperative Agreement program has been eliminated, leaving these infant programs in an extremely perilous condition. Michigan, for example, has seen its program, covering both animals and plants, cut by 90% -- from $600,000 to $60,000. The program enjoyed the support of substantial numbers of volunteer citizens and experts in the academic community, whose efforts saved the program thousands of dollars in consultant's fees, etc. However, continuation of an effective volunteer program requires the coordination of the governmentally funded program, which has now been severely reduced.

Listing of additional endangered and threatened plant species has come to a standstill. Since the new Administration took office, only two plants have been added, and the necessary paperwork for these was completed under the Carter Administration.

Equally disturbing, the Fish and Wildlife Service has ignored Congressional intent and the advice of a General Accounting Office report in formulating a priority system to determine which few species will be listed in the near future. Instead of treating all taxa equally and setting each species' priority by the degree of threat, the Service has attached a higher value to conserving mammals and birds. Thus, a full species of vascular plant, no matter how valuable to man, is less likely to be listed than a subspecies of mammal, bird, fish, reptile, or amphibian. The legality of this priority system is currently under review by various conservation organizations.

In the meantime, 9 species of plants which have already been proposed for listing are in limbo as a result of the virtual shut-down of the listing process. The two-year deadline for listing these species will begin coming into effect in August 1981.

Even if the present logjam is broken and these species are listed, many other plant species requiring protection under the Act will remain defenseless. Among these are plants of surpassing beauty, such as the white fringed prairie orchid (Plantathera (Habenaria) leucophaea). About 100 of the extremely valuable species are species in the same genus as important food crops (see attachment), and may contain germplasm that would improve the crop's yield, quality, or resistance to pests or climatic extremes. Considering the role that wild germplasm has already played in improving sunflowers, we are deeply concerned that 14 species of the genus Helianthus are included among the unlisted candidate species.

Many of the cactus and carnivorous plant species that are under consideration for listing have proven economic value in the horticultural trade. At present, widespread and often illegal collecting threatens to extirpate them, thus destroying this valuable resource. Dealers seeking to propagate many of these species find that thy cannot compete successfully with the collectors. Once the plants are protected under the Act, however, a limited number might be used to provide propagative material that would allow the continuation of a sustainable trade.

The vast majority of plant species now threatened with extinction are found in the tropics, particularly moist tropical forests. The causes and implications of this impending catastrophic loss have been discussed by Drs. Peter Raven, Norman Myers, Paul Erlich, and others in their writings and at the recent U.S. Strategy Conference on the Conservation of Biological Diversity. While the United States has jurisdiction over few tropical areas (Hawaii is considered one of the most unique and most threatened), we can nevertheless promote conservation of these important biomes and their constituent species through full implementation of §8 of the Endangered Species Act. The first imperative is to restore the use of P.L. 480 excess foreign currencies authorized by the statute. Second, the program should be expanded to countries in addition to the four where such currencies are now available by authorization and appropriation of dollar expenditures.

In conclusion, the organizations joining in this testimony urge that the Endangered Species Act be strengthened by the adoption of the following substantive amendments:

- extension of the taking prohibition to plants;
- authorization of funding for the §8 foreign assistance program;
- deletion of §4(b)(4), which requires preparation of an economic impact assessment prior to designation of critical habitats.

We also suggest that a technical amendment is required to clarify agency responsibility for "terrestrial" as opposed to other types of plants. We further urge that vital provisions currently in the statute be retained: §7 provisions protecting species habitat; §6 authorization of State cooperative agreements; §9 prohibitions on interstate and foreign commerce; §14 requirements that importers and exporters of wildlife and plants be licensed; and §5 authorization of habitat acquisition.

As we have pointed out in our testimony, the major problems associated with the Act concern inadequate implementation. Therefore, we ask the Committee to call for adequate funding and personnel levels in all the responsible agencies (FWS, APHIS, and NMFS) to realize the inspired promise of the Act. This funding should include appropriate dollar amounts for §§6 and 8. The Committee should direct the responsible agencies to promulgate regulations required by the statute. Finally, the Committee should direct the FWS to publish a proposed priority system for comment by the public and scientific community.

The organizations joining in this testimony appreciate this opportunity to present our views to the Committee. We look forward to working with you during the reauthorization process.

Prepared by

Faith Thompson Campbell, Ph.D.
Natural Resources Defense Council
(202) 223-8210

WILD RELATIVES OF NEW WORLD CROPS CONSIDERED
ENDANGERED OR THREATENED SPECIES
IN THE UNITED STATES

Introduction

The wild species belonging to the same *genus* of plants as a domesticated crop can potentially serve as a secondary gene pool for that crop, contributing resistance, hardiness or other qualities to it. For major crops, the transferrance of one "wild-type" gene for insect or disease resistance into commercial varieties has sometimes led to the savings of hundreds of thousands of dollars (formerly suffered in crop losses) by farmers. Although plant breeders are now responsible for most new transfers of genes from wild species to their domesticated relatives, this process has apparently occurred prehistorically and historically, where crops were grown adjacent to wild populations of plants with which they were cross-compatible.

Our concern here is that too few people realize that many potentially valuable wild relatives of crops are threatened or endangered *within* the United States and its territories. Too often, government reports give the impression that nearly all genetic resources lie in foreign countries, where we, as American citizens, are virtually powerless in encouraging their *in situ* protection. What tends to be overlooked is that there are over 100 wild species of plants related to New World crops that are currently threatened by extinction within our boundaries--few of their populations fall within nature conservancy areas, and hardly any have had some of their seeds collected for preservation in seed banks.

If one is concerned about plant extinction and its relation to human well-being, perhaps the following list of plants can provide a focus for action. There is an effort underfoot to drop plants from protection by the regulations established after the Endangered Species Act of 1973; it is critical that people immediately begin to lobby to keep plants under the jurisdiction of this Act, and to strengthen the botanical staff of the U.S. Fish and Wildlife Service's Endangered Species Program. It is also necessary to help establish and manage preserves or conservancy areas where populations of these species occur, and to fight landscape destruction which threatens their other habitats. Some state native plant societies have begun "Adopt a Plant" programs to help protect, propagate and reestablish endangered species. Finally, it is essential that we have a "back up" system, including collection and storage of viable seeds of these species, in case anything happens to remaining wild populations.

These data were assembled by overlapping three kinds of listings. The list of threatened and endangered plants used was that which appeared in the December 15, 1980 *Federal Register*. We have added a few to this list based on our own field observations and literature and herbaria searches; these and others not "officially" endangered are set off in parentheses. The choice of genera which included New World domesticated (not merely cultivated) crops was done utilizing sources such as: Robert L. Dressler's *The Pre-Columbian Cultivated Plants of Mexico* (Harvard University Botanical Museum Leaflets, Vol. 16, No. 6, 1953); Richard I Ford's "Gardening and Farming Before A.D. 100: Patterns of Prehistoric Cultivation North of Mexico" (*Journal of Ethnobiology*, Vol. 1, No. 1. 1981); and N. W. Simmond's *Evolution of Crop Plants* (Longman, London, 1976).

Finally, we checked for the species in the genera appearing on both kinds of lists in a winter, 1978 computer printout of species stored in the National Seed Storage Laboratory in Fort Collins, Colorado. If seeds of a species were stored in the NSSL, we have marked its listing with an asterisk--Very few of these are now stored in Fort Collins, although seeds or nursery stock may be available in other stations of the National Plant Germ Plasm System. We encourage others to help us refine this listing, and grant permission to reprint, distribute or utilize it in any way that potentially contributes to increased public awareness of the challenge ahead of us.

A Survey By
Gary Nabhan

SOUTHWEST TRADITIONAL CROP CONSERVANCY GARDEN AND
SEED BANK, A PROJECT OF MEALS FOR MILLIONS/
FREEDOM FROM HUNGER FOUNDATION SOUTHWEST
PROGRAM, 715 NORTH PARK AVENUE,
TUCSON, ARIZONA.

(parentheses indicate not an official list; * indicates in NSSL collections)

COMMON NAME OF NEW WORLD CROPS	SCIENTIFIC NAMES OF CROPS IN GENUS	ENDANGERED OR THREATENED WILD RELATIVES IN GENUS	STATES AND TERRITORIES WHERE FOUND
Dwarf sisal	Agave angustifolia	A. arizonica	AZ
Cantala	A. cantala	A. chisoensis	TX
Henequen	A. fourcroydes	A. eggersiana	VI
Pulque	. mapisaga		
Pulque	A. salmiana	A. parviflora	AZ
Sisal	A. sisalana	A. schottii var. treleasei	AZ
Tequila	A. tequilana		
		A. toumeyana var. bella	AZ
		A. utahensis var. eborispina	CA, NV
		A. utahensis var. nevadensis	CA, NV
Grain amaranths	Amaranthus caudatus	A. brownii	HI
	A. cruentus		
	A. hypochondriacus		
Nance	Byrsonima crassifolia	B. horneana	PR
		B. ophiticola	PR
Jackbean	Canavalia ensiformis	C. centralis	HI
		C. forbesii	HI
		C. haleakalaensis	HI
		C. kauaiensis	HI
		C. kauensis	HI
		C. lanaiensis	HI
		C. makahaensis	HI
		C. molokaiensis	HI

(parentheses indicate not an offical list; * indicates in NSSL collections)

COMMON NAME OF NEW WORLD CROPS	SCIENTIFIC NAMES OF CROPS IN GENUS	ENDANGERED OR THREATENED WILD RELATIVES IN GENUS	STATES OR TERRITORI WHERE F
		C. munroi	HI
		C. hualoloensis	HI
		C. peninsularis	HI
		C. pubescens	HI
		C. rockii	HI
		C. stenophylla	HI
Huazontle	Chenopodium berlandieri var nuttalliae	C. oahuense var. discospermum	HI HI
Quinoa	C. quinoa*	C. pekeloi	
Cañahua	C. pallidicaule		
Mexican hawthorn	Crataegus pubescens	C. berberifolia	TX
		C. harbinsonii	AL, CA, TN
		C. stenosepala	TX
		C. sutherlandensis	TX
		C. warneri	TX
Calabash tree	Crescentia cujete	C. portoricensis	PR
Squashes and pumpkins	Cucurbita ficifolia*	C. okeechobeensis	FL
	C. maxima*	(C. texana)	TX
	C. mixta*		
	C. moschata*		
	C. pepo*		
Cotton	Gossypium hirsutum*	(G. tomentosum*)	HI
Sunflower	Helianthus annuus*	(H. anomalus)	AZ, UT
Jerusalem artichoke	H. tuberosus	H. carnosus	FL
		H. debilis ssp. vestitutus	FL

COMMON NAME OF NEW WORLD CROPS	SCIENTIFIC NAMES OF CROPS IN GENUS	ENDANGERED OR THREATENED WILD RELATIVES IN GENUS	STATES AND TERRITORIES WHERE FOUND
(parentheses indicate not an official list; * indicates in NSSL collections)			
		(*H. deserticola*)	AZ, NV, UT
		H. eggertii	AL, KY, TN
		H. exilis	CA
		H. glaucophyllus	NC, TN
		H. laciniatus ssp. *crenatus*	NM
		H. ludens	
		H. niveus ssp. *tephrodes*	CA, AZ
		H. nuttallii var *parishii*	CA
		H. paradoxus	TN
		H. praecox ssp. *hirtus*	TX
		H. praetermissus	NM
		H. schweinitzii	NC, SC
		H. smithii	AL, GA
Sweet potato	*Ipomoea batatas**	*I. cardiophylla*	TX
		I. egregia	AZ
		I. krugii	PR
		I. lemmonii	AZ
Cassava	*Manihot esculenta*	*M. davisiae*	AZ
		M. walkerae	TX
Prickly pear	*Opuntia ficus-indica*	*O. arenaria*	NM, TX
		O. basilaris	CA
		var. *brachyclada*	
		& var. *longiareolata*	AZ
		& var. *treleasei*	AZ, CA
		& var. *woodburyi*	UT

COMMON NAME OF NEW WORLD CROPS	SCIENTIFIC NAMES OF CROPS IN GENUS	ENDANGERED OR THREATENED WILD RELATIVES IN GENUS	STATES AND TERRITORIES WHERE FOUND
(parentheses indicate not an official list; * indicates in NSSL collections)			
		O. bigelovii var. *hoffmanii*	CA
		O. borinquensis	PR
		O. imbricata va. *argentea*	TX
		O. munzii	CA
		O. parryii var. *serpentina*	CA
		O. phaecantha	AZ
		var. *flavispina*	
		& var. *mojavensis*	AZ, CA
		& var. *superbospina*	AZ
		O. spinosissima	FL, PR, VI
		O. strigil var. *flexospina*	TX
		O. triacantha	FL, PR, VI
		O. whipplei var. *multigeniculata*	AZ, NV, UT
		O. wiginsii	CA
Sonoran Millet	*Panicum sonorum* (or *P. hirticaule* var. *miliaceum* domesticate)	*P. Alakaiense*	HI
		P. carteri	HI
		P. fauriei	HI
		P. hirstii	GA, NJ
		(*P. hirticaule* var. *miliaceum* or *P. sonorum* wild)	AZ, CA
		P. lithophilum	GA, SC
		P. niihauense	HI
		P. nudicaule	AL, FL, MS

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The Nature Conservancy

1800 North Kent Street, Arlington, Virginia 22209
(703) 841-5300

OFFICE OF THE PRESIDENT
(703) 841-5330

January 13, 1982

The Honorable John H. Chafee
United States Senate
5229 Dirksen Senate Office Bldg.
Washington, D.C. 20510

Dear Senator Chafee:

In response to your request for specific comments on the Endangered Species Act prior to reauthorization hearings in 1982, The Nature Conservancy wishes to express its support for reauthorization of the legislation for another three years. In view of the growing worldwide recognition of the need to conserve the earth's biological diversity before it is senselessly obliterated, it would be extremely disheartening and damaging for the United States to relinquish its leadership on this issue.

The available evidence indicates that the Act generally has worked well since the 1978 amendments were passed, with one notable exception: the biological ascertainment and listing process authorized by Section 4. The Conservancy believes that the scientific ascertainment process of Section 4 underpins all other aspects of the legislation. Without adequate information, it is impossible to determine which species are truly in danger, or to craft cost-effective strategies for managing those that are. I urge the Committee to carefully review Section 4 in the upcoming hearings to ensure that the fundamental scientific basis for the endangered species program is reaffirmed, and that ascertainment and listing occur quickly and efficiently.

That the biological research process has slowed considerably is obvious; only four listing actions occurred in 1981. Furthermore, it is clear that the process is not keeping pace with known needs. Approximately 3,000 U.S. species thought to be endangered await review and listing, four times the 756 U.S. and foreign species listed in the entire history of the Act.

What accounts for this lack of productivity? First, the assessment process has been increasingly ensnarled in an increasingly complex listing procedure, which itself produces little biological information. Second, insufficient resources have been devoted to the research enterprise, given the challenges faced.

Both of these phenomena appear to result in part from a fear that assessing and managing our nation's endangered plants and wildlife would create severe economic disruptions. Yet all available evidence indicates that no such disruptions have occurred. In more than 9,000 interagency consultations, only 154 federal projects have been found to pose potential dangers to endangered species, and of these 154, all but a handful have ultimately been allowed to proceed. While it is true that occasional conflicts between species and development projects will not be resolved in the consultation process, the Act provides an exemption procedure to handle those cases. This kind of conflict resolution clearly should not be taking place in the ascertainment process.

The Conservancy's direct experience in conserving endangered species indicates that once the truth about the status of such a species is known, all sorts of protection options are available to manage it without causing economic disruption. We have helped establish 27 state natural heritage inventories for the purpose of compiling and assessing existing information on a state's rare species. It is not unusual for a state heritage program to discover that species thought to be endangered are in fact not, and that no special management for them is needed. For example, the Wyoming heritage program assessed 19 plant species that were potential candidates for listing under the Act. Over a two-year period, research showed that only 5 were actually in jeopardy, and these occupy less than 50 acres of terrain. Thus, for species identified as truly endangered, good data also enable us to choose the best site or sites where they can be protected.

The biological research function of the Act is not only vital to federal endangered species efforts; it also guides to a great extent the activities of non-federal organizations and individuals. A large amount of species conservation work in the United States is being conducted by private conservation organizations, museums, universities, native plant societies, and state and local governments. These efforts often depend on or relate to the biological research activities funded by the federal government under various sections of the Act. If the federal research process falters, the effectiveness of non-federal conservation efforts are likewise diminished. To cite just one example, The Nature Conservancy and other organizations utilize the federal endangered species list to help direct their land acquisition priorities.

State fish and wildlife agencies also can play an important role in the research and ascertainment process by identifying endangered species that can be protected at the state level. Even more could be accomplished by the states if they received adequate grants under Section 6 of the Act. I urge the Environment and Public Works Committee to do what it can to ensure that appropriations for Section 6 are made on a regular basis, and at a level commensurate with state needs.

To conclude, I urge the Committee to revise Section 4 of the legislation to enable the biological ascertainment and listing of endangered species to occur rapidly, and without hindrance by cumbersome procedures and non-biological considerations; the proper functioning of the entire Act depends on it. It is also important to ensure that the United States gets on with the business of conserving its biological diversity by providing adequate funds to run the endangered species program and to finance the biological research function. States, especially, should receive steady grant assistance from the federal government to fulfill their role as partners in the Act's implementation.

The Nature Conservancy stands ready to assist your Committee in researching and drafting a workable endangered species program. Please call on us if we can be helpful.

Sincerely,

Bill Blair

William D. Blair, Jr.
President

NORTHEAST UTILITIES

NU
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THE HARTFORD ELECTRIC LIGHT COMPANY
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NORTHEAST NUCLEAR ENERGY COMPANY

P.O. BOX 270
HARTFORD, CONNECTICUT 06101
(203) 666-6911

JOHN P. CAGNETTA
VICE PRESIDENT
NUCLEAR AND ENVIRONMENTAL ENGINEERING

December 30, 1981

The Honorable John H. Chafee
Chairman
Subcommittee on Environmental Pollution
Committee on Environment and Public Works
4204 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Senator Chafee:

On November 16, 1981 Northeast Utilities Service Company responded to a notice published in the Federal Register, dated September 16, 1981, requesting comments on the need for reform of the procedures and policies associated with the Endangered Species Act of 1973. Enclosed is a copy of this letter.

On behalf of Northeast Utilities I wish to submit this letter into the record of the Senate oversight hearings on the Endangered Species Act held December 8 and 10, 1981.

Thank you for providing us this opportunity to express our views and concerns regarding this legislation prior to its reauthorization.

Very truly yours,

John P Cagnetta

John P. Cagnetta
Vice President

JPC/jmo
enclosure

cc: Mr. Steven Shimberg
Assistant Counsel
Fish and Wildlife Service
Subcommittee on Environmental Pollution
Committee on Environment and Public Works
61 Capitol Hill Annex
Washington, D.C. 20510

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NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

P.O. BOX 270
HARTFORD, CONNECTICUT 06101
(203) 666-6911

November 16, 1981

Director
Fish and Wildlife Service
Department of the Interior
18th and C Streets, N. W.
Washington, D.C. 20240

Re: Review of Endangered Species Act of 1973, as Amended

Dear Sir:

We are responding to your request for comments, published in the Federal Register on September 18, 1981 (46 F.R. 46411), on the need for reform of the procedures and policies associated with the Endangered Species Act of 1973, as amended, 16 U.S.C. §1531 et seq. (the "Act").

The thrust of these comments is directed at the Act itself. The inflexibility of the Act, especially Section 9, dealing with prohibited acts, conflicts with the cost/benefit-oriented balancing procedure favored by the Administration and promoted by Executive Order 12291.

Executive Order 12291 requires that, in developing or revising any rule, federal agencies must, among other things, (i) undertake regulatory action only when the potential benefits to society from the action outweigh the potential costs to society, (ii) choose among alternative approaches to any regulatory goal the approach involving the least net cost to society, and (iii) take into account the condition of affected industries, as well as the national economy, when setting regulatory priorities.

Merely changing the rules, management practices or the personnel commitments of the Fish and Wildlife Service or the National Marine Fisheries Service ("NMFS") will not eliminate the substantial uncertainties associated with Section 9 of the Act and the problems that those uncertainties create for companies like Northeast Utilities.

Our comments are the product of a frustrating and disturbing experience which Northeast Utilities has had with the stiff prohibitions of Section 9. In mid-1978, Northeast Utilities suspended all activities connected with a proposed project to construct two nuclear units on Montague Plains near the Connecticut River in Montague, Massachusetts. During the planning stages of this project, it was discovered that an endangered species, the shortnosed sturgeon, existed in the Holyoke Pool of the river. That pool would have been the source of cooling water for the project. The presence of this species, and uncertainties as to the way in which Section 9 of the Act would be applied during the federal licensing process and thereafter, presented difficult problems that were never resolved. The presence of this species, which recent data indicate is plentiful in many rivers along the east coast, continues to concern Northeast Utilities regarding any future development of the Montague site.

Accordingly, Northeast Utilities proposes the following revisions to the Act:

1. Limit the definition of the term "take" in Section 3(19) to include only acts that are willful and knowing. A person who willfully and knowingly captures an endangered species, whether for commercial exploitation or otherwise, deserves the sanctions imposed by the Act. Those sanctions should not be extended to an electric utility which is obligated by law to provide its customers with a reliable supply of electric energy at a reasonable cost. We propose amending Section 3(19) of the Act [16 U.S.C. §1532(19)] to read as follows:

> The term "take" means to willfully and knowingly harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to willfully and knowingly attempt to engage in any such conduct.

2. Add to Section 7 of the Act, dealing with interagency cooperation, two additional exceptions similar to the exception found in Section 7(o). The first would exempt from the list of "prohibited acts" in Section 9 of the Act any action taken in accordance with the advice rendered by the Secretary following a consultation under Section 7. The second would exempt from the list of "prohibited acts" any action taken in accordance with a license granted by another federal agency, if the granting of the license was subject to review under the National Environmental Policy Act("NEPA"), 42 U.S.C. §4321 et seq.

Section 7(a)(2) requires each federal agency, in consultation with the Secretary, to insure that any action authorized, funded or carried out by such agency, is not likely to jeopardize the continued existence of an endangered or threatened species or result in the destruction or adverse modification of such species' critical habitat. Section 7(b) requires the Secretary, after consultation, to submit to the federal agency responsible for the proposed action a written statement setting forth the Secretary's opinion "detailing how the agency action affects the species or its critical habitat." Section 7(b) also requires the Secretary to suggest those reasonable and prudent alternatives to the proposed action which he believes would not violate Section 7(a)(2) of the Act. We believe compliance with any of those suggestions, or with an opinion that the proposed action will not violate the mandate of Section 7(a)(2), should exempt the action from the prohibitions of Section 9.

Similarly, Northeast Utilities also believes the Act should be amended to provide that compliance with the provisions of a license granted following a NEPA review should exempt the action from the prohibitions of Section 9. Furthermore, since NEPA is more flexible than the Act, and requires a balancing of the costs and benefits associated with the proposed action, compliance with a license granted following a NEPA review would also meet the President's goal of choosing, among alternative approaches to the regulatory objective of species conservation, the approach involving the least net cost to society. We propose amending Section 7(o) [16 U..C. §1536(o)] to read as follows:

> Notwithstanding Sections 4(d) [16 U.S.C. §1533(d)] and 9(a) [16 U.S.C. §1538(a)] of the Act or any regulations promulgated pursuant to such sections, (i) any action taken in accordance with the Secretary's opinion rendered in accordance with Section 7(b) [16 U.S.C. §1536(b)] of this Act, (ii) any action for which an exemption is granted under Section 7(h) [16 U.S.C. §1536(h)] of this Act, or (iii) any action taken in accordance with a license, permit or approval which has been granted following the preparation of an environmental impact statement under the National Environmental Policy Act shall not be considered a taking of any endangered or threatened species with respect to any activity which is necessary to carry out such action.

Together, we believe these proposed amendments would add needed flexibility to the Act to permit industrial development while protecting endangered species from willful and knowing destruction. This would bring the Act into accord with the goals of Executive Order 12291 by permitting regulatory action under the Act to be taken in a manner to maximize the net benefits to society.

Very truly yours,

Walter F. Fee

Walter F. Fee
Executive Vice President

cc: Mr. Ronald E. Lambertson
Associate Director
Department of the Interior
18th and C Streets, N.W.
Washington, DC 20240

TESTIMONY BEFORE THE SENATE COMMITTEE ON ENVIRONMENT
AND PUBLIC WORKS by Hope Ryden, 345 E 81st Street, NYC 10028

I am the author of seven books on North American wild animals, including one on a species currently listed as endangered, "The Little Deer of the Florida Keys" (Putnams). My most recently published book is on the North American bobcat, "Bobcat Year" (Viking Press). It is the end result of three years of tracking that elusive species in four states---Arizona, Idaho, Florida and California. Smithsonian magazine carried a cover story by me on the subject of the bobcat in June of this year.

Because my field experience tracking bobcats and conversations with people living near prime bobcat habitat has convinced me that the animal is in-decline, I wish to oppose any amendment to the Endangered Species Act which would eliminate the modicum of protection currently granted this animal through U.S. participation in CITES. That modicum of protection, put simply, asks the US to be in possession of biological information showing world trade is not harming the species before authorizing pelt export.

Cats are particularly vulnerable to man-related pressures of all kinds. Because they are top-of-the-food-chain feeders, they have not evolved the reproductive resiliency of the prey species they feed upon. Species which, over long ages, have served as food for other species, necessarily, are prolific breeders. Bobcats, by contrast, bear few young and raise even fewer, for they have never had to compensate being preyed upon.

Yet man has today mis-cast the bobcat in the unnatural role of a prey species and is harvesting this predator in massive numbers. That the bobcat may quite rapidly succomb to this unnatural pressure is likely, judging from the fate of the six other wild felines once native to our country. Gone are our ocelots, margays, jaguarundis and jaguars. Our mountain lion, once widespread, now inhabits but a few remote regions in the West and perhaps the Florida Everglades. And the lynx, whose range in the United States borders Canada, has not been seen in the New England states or Wisconsin for several years.

If our federal government has been remiss in its failure to respond to a petition from Defenders of Wildlife asking it to review the bobcat's status, ten states have granted the animal protection within their borders. All ten, however, are quick to acknowledge that bobcats no longer grace their soil; either the species is extinct (three states) or so nearly absent as to present little hope for recovery.

Most Americans find this policy of offering animals nominal protection after they no longer exist deplorable. Notwithstanding testimony before this committee by Mr Stephen Boynton, counsel for the American Fur Resources Institute, in which he epressed an opposing view---"where doubt exists whether or not an animal is endangered, it is wrong to err on the side of the animal," the overwhelming majority of Americans would give the benefit of any doubt in such a matter to the animal. Most informed Americans, therefore, would wholeheartedly support action taken by the framers of the CITES Treaty, which added our bobcat to a special appendix, a list of "vulnerable species for which available data suggests that continued take on the current scale will render them threatened with extinction." CITES asks member nations which export animals so listed to be in possession of information showing such export is not harmful to these species. Most Americans would not regard this stipulation as being excessively restrictive. Most Americans would view it as a reasonable and wise precaution.

Mr Boynton, however, has put another face on the matter. He has characterized all those in support of this Treaty regulation as "anti hunting/anti-trapping interests who are trying to block *harvest*." (testimony December 8,1981). Thus he has presented to this committee grossly misleading information, not only on the motives of CITES supporters, but on the actual contents of the CITES Treaty. The CITES Treaty leaves the question of whether or not an animal be *harvested* entirely up to the nation in which that animal (endangered or otherwise) resides. CITES' sole stipulation is that member nations not *export* particularly vulnerable species without knowledge of the impact that heavy export might wreak on them. Deppite the fears of Mr Boynton and Mr Huey of the International Association of Fish and Wildlife Agencies, honoring our CITES Treaty poses no threat to their conviction that states be the undisputed arbiters of how many bobcats are killed each year. Nor does any CITES Treaty stipulation stop American furriers from purchasing unlimited quantities of bobcat pelts. All the CITES Treaty does do is to ask the United States to act responsibly toward a species that is today the object of unprecedented exploitation on a world market.

Any amendment to the Endangered Species Act, therefore, which would undermine our commitment to the CITES Treaty, not only would sabotage a species in need of overseeing, it would also do irreparable harm to the international conservation movement, hastening floral and faunal extinctions which are already occurring at a phenomenal rate.

In the past, natural extinctions occurred at a slow pace. Even the so-called rapid extinctions at the close of the age of the dinasaurs took place at a rate of but one every thousand years. Today, unnatural, man-related extinctions are occurring at an explosive pace. Since 1950 one species has met eternal oblivion every year. Some biologists predict that by the end of this century one species will disappear from the planet every eighteen minutes.

To slow down this escalating devastation, national effort is not enough; world cooperation is imperative. Toward this end, the United States has taken a position of leadership, being instrumental in organizing the Convention on International Trade in ENdangered Species or CITES in 1973 and taking part in the drafting of the convention treaty. Since then, seventy-five nations have become members and have pledged to abide by CITES Treaty regulations.

It is ironic that our own nation's scientific authority (formerly ESSA) should have failed to live up to the terms of this CITES Treaty, as was demonstrated in a court action taken by Defenders of Wildlife against ESSA. Last April Judge June Green, acting upon instructions fom a higher appeals court, enjoined our scientific authority from allowing further export of bobcat pelts until it possessed more reliable population estimates on the bobcat.

Intervenors in that case,who sided with the governmant, have not taken this defeat lightly. Fur and trapping interests, together with the International Association of Fish and Wildlife Agencies,are now pressing Congress to amend the Endangered Species Act so as to provide a loophole through which lucrative bobcat skins can once again be shipped in unlimited quantities to an insatiable overseas market.

If such an amendment is adopted by Congress, not only will the future of the North American bobcat be put into jeopardy, but efforts to protect endangered animals worldwide will also be undermined. For any such move on our part will be an invitation to other member nations to follow suit. That certain nations already suspect the United States of hypocrisy in matters of wildlife conservation was made plain at the last meeting of CITES held in India in March. Third World delegates described an American maneuver to dilute protection of parrots (important to the American pet industy) and an

American attempt to allow trade in certain whale products as "a prescription for subterfuge." The *New York Times* denounced our conduct at that meeting as a "retreat from a leadership position."

I should not think that Congress would wish to lend credence to the cynical view of our country held by other party nations to CITES by changing the rules we are committed to abide by to suit economic interests. Nor would I think Congress would act in any way which would compromise the fate of a native species whose future looks to be in some jeopardy. Some indication of the bobcat's decline can be seen by examining Animal Damage Control Records from 1960 to 1976. Whether these cats were intentionally or inadverantly killed is of no consequence: the figures tell the story.

1960	25,808	1972	5,351
1961	25,171	1973	4,526
1962	21.228	1974	3,811
1963	20,780	1975	2,559
1964	20,918	1976	1,500
1965	17,294		
1966	13,365		
1967	11,031		
1968	9,351		
1969	8,413		
1970	8,403		
1971	6,608		

That the bobcat is threatened by unregulated international trade in its pelt should be evident to anyone who notes the fate of its predecessors on the coat rack. It was because clouded leopard, ocelot, jaguar, cheetah and other spotted cat populations had become severely depleted that CITES placed an unconditional ban on further trade in these wild felines. A substitute fur of similar appearance was sought and our North American bobcat was discovered by the world fashion industry. Eleven skins pieced together into a full length coat began to be marketed for the unprecedented price of $8,000 and up. Demand for this formerly scorned fur skyrocketed in Japan, West Germany, France and Italy, a fact that was quickly registered at fur auctions. The price of a prime bobcat skin which sold for $20 in 1970 brought as much as $650 by 1980---an increase of 3,250% in a decade's time! Concurrently, trapping pressure on the bobcat intensified as housewives, retirees, teenagers and anyone else interested in making a fast buck, joined the ranks of the professionals who trap for dollars. (Tragically, the bobcat is ridiculously easy to catch, even by amateurs. It cannot keep its probing paws out of even a poorly set and completely obvious trap.)

Had escalating trapping yielded escalating "takes", there might now be no cause for alarm. But while trapping license sales jumped each year (between 1979 and 1980 by 21%) , no parallel increase in pelt take was recorded. On the contrary, roughly 90,000 skins have been tagged and shipped overseas each year since records began to be kept in 1977. This is a clear warning that the animals now being harvested are not "surplus" individuals at all, but members of the critically important breeding stock. Studies by Brandt and Keith on the bobcat's closest relative, the Canada lynx, show that when that animal has been trapped during years when its numbers have fallen below a critical level (in the wake of a cyclical snowshoe hare decline), the species does not recover but is permanently extirpated from the region.

It was not until 1976 that the bobcat's plight was brought to the attention of CITES membership. Suddenly mindful of the impact that the protection of cheetahs, leopards, etc, was having on the North American bobcat, they added it to Appendix 2 of the Treaty. Thereafter the United States was obliged to be in possession of biological information showing no harm to the animal before allowing export.

ESSA's initial response to this new obligation was quite proper. Bobcat export was banned pending the gathering of information on its status. The embargo, however raised an immediate outcry from the state game and fish agencies (whose coffers, incidentally, had swelled -- from increased sales and higher fees charged on trapping licenses--in ARizona the price of a trapping license was upped from $3.00 to $50.00 in response to the bobcat bonanza) . Nor were organized trapping and fur interests quiet in the expression of their displeasure.

But the embargo had a telling effect on pelt prices. They plummeted. Dollars paid at fur auctions and by middlemen who purchase the take of local trappers so declined that interest in trapping bobcats also dampened. It appeared, then, that the species would gain a much needed reprieve through the simple mechanism of an embargo.

But within months the United States scientific authority reversed itself. Based on scant biological information, it once again permitted unlimited export of bobcat skins to any state that would initiate a tagging program. Pelt prices shot up, once again revealing that pressure on the bobcat was indeed an artifact of an overseas fashion industry.

It is hard to understand ESSA's failure to obtain the required information on the bobcat's status, or, lacking this, its unwillingness to ban bobcat export. For despite a statement to this committee by Mr Stephen Boynton to the effect that it is not possible to obtain reliable population information on bobcats any more than on the also abundant rabbit, such is not the case. Mr Boynton's statement fails at every level. The bobcat is hardly abundant, Though its range is wide, it is a sparsely distributed, top-of-the-food-pyramid animal whose numbers are low in relationship to those of the rabbit---- an animal whose abundance is grounded in the biological fact that it is positioned at the base of the food pyramid. Moreover, the abundant rabbit's population is by no means impossible to census. One technique used to obtain a base-line figure on rabbit density is to repeatedly drive a particular transect at dusk at a set speed and count the number of rabbits observed. Highly sophisticated statistical procedures can be used to project such counts across wide areas of similar terrain.

Bobcats can be monitered by a number of techniques. Live trapping of a circumseribed area will reveal the average size of a home range used by one cat. This figure can be used to project bobcat density in similar terrain elsewhere. Whenever a sampling of any such terrain shows a lowered density of animals, the population can be assumed to be in-decline.

Wildlife managers are well versed in reliable techniques for censusing animals, and the U.S. C urt has granted the federal scientific authoriity considerable discretion in determining the method by which bobcat estimates be made. It was surprising, therefore to hear testimony before this committeee from Carol Dinkins, assistant attorney General, suggesting otherwise. In referring to the court case Ms Dinkin defended ESSA's inability to live up to the court imposed standards stating the agency had instead "emphasized population trend information rather than specific numbers." She thus implied that the court had put an unreasonable demand on ESSA by asking for "specific numbers."

To set the record straight, I should like to quote from the Appeals Court opinion, Feb 3, 1981, which directed ESSA to obtain reliable population information on the bobcat:

"We do not suggest that the Scientific Authority may base a no-detriment finding only upon some kind of head count of animals or some other method of measurement that, as a practical matter, would be virtually impossible to make. All the Scientific Authority is required to do is to have a reasonably accurate estimate of the bobcat population before it makes a no-detriment finding. The Scientific Authority has considerable discretion to determine the method by which that estimate may be made and in evaluating its reliability."

* It is hard to fathom why ESSA failed to accept its obligation. It is to be hoped that the new scientific authority (ICAC) will perform its duties more effectively.

Meanwhile, it should be obvious to this committee that the Endangered Species Act ought not be weakened in response to demands by those who would have our wild animal populations regulated solely by the dictates of the marketplace. The purpose of the Endangered Species Act is to protect vulnerable life forms, not to cater to interests that want to exploit these vulnerable life forms for money or sport. We, as a nation, have already lost an array of wonderful creatures once native to our soil. No longer does the red wolf, the Eastern bison, the Carolina paraqueet, the ivory billed woodpecker, the black footed ferret, the dusky sparrow, the passenger pigeon or the Arizona jaguar grace our land. Our record of stewardship leaves much to be desired. We cannot bring back what is now lost for all ages, but we can preserve what still exists. And at this eleventh hour the overwhelming majority of the American people will support a firm resolve to do just that. This is no time for compromise; this is a time for recommitment.

I trust this committee will perform to the best of its ability and offer our nation a strong Endangered Species Act without weakening amendments. In so doing you will serve not only the quality of life of future generations of Americans, but the long range, mysterious, purposes of a manifold, abundant and wondrous natural world.

STATEMENT SUBMITTED BY THE SAFARI CLUB INTERNATIONAL FOR THE OVERSIGHT HEARINGS ON THE ENDANGERED SPECIES ACT BEFORE THE SENATE SUBCOMMITTEE ON ENVIRONMENTAL POLLUTION ON DECEMBER 8 AND 10, 1981

The Safari Club International ("SCI") is a sportsman's group dedicated to the conservation of wildlife, the preservation of sport hunting and the protection of hunters' rights. SCI represents more than one million sportsmen in that we are an organization composed of local and regional membership chapters, associate members, and affiliates. SCI sincerely appreciates the opportunity to present our views and proposals on the Endangered Species Act before this Subcommittee today.

Sport hunting is not merely a sport, rather it is recognized as playing an immensely important and valuable role in effective wildlife conservation and management programs in the United States and abroad. It is not the sportsman who is a threat to wildlife species. Rather, the dangers to wildlife are found in the continuing loss of habitat and the illegal profit-seeking poacher who has no regard for wildlife or the laws designed to conserve and protect such resources.

The sport hunter is the true conservationist. We need not remind the Members of this Subcommittee that it has been the sportsmen of this nation who have provided more than $5 billion over the years for wildlife conservation projects through the purchase of hunting and fishing licenses, permits, fees, and other private contributions. Moreover, wildlife conservation programs in many foreign nations are almost solely dependent upon the revenues generated from regulated hunting and safari operations.

> "American sportsmen have traditionally supplied the bulk and funds for wildlife conservation efforts in the United States. The situation is the same in Africa. If individual African nations are to develop adequate conservation programs, they will undoubtably have to utilize funds provided by foreign hunters. [Sport hunting] will permit the African nations to continue to receive revenue from American sportsmen so that the nations can develop and implement an adequate wildlife management effort that will insure the long-term perpetuation of the resource." H.R. Rep. No. 96-661, Part 1, 96th Cong., 1st Sess. 18 (1979).

> "The [House] Committee [on Merchant Marine and Fisheries] also recognizes that one of the major impediments to the development of an effective elephant management and habitat conservation program is the absence of sufficient funds in African nations which have important and pressing human needs to satisfy. In order to assist these nations in generating funds for elephant conservation programs, and for controlling the trade in elephant products, the Committee specifically exempted from the provisions of H.R. 4685 the importation of elephant tusks taken by sports hunters. The evidence presented to the Committee showed that in 1977, sportsmen took only 577 elephants. In this regard, it should be noted that Ian Parker estimated that approximately 65,000 elephants die each year as a result of human influences, including sport hunting. Other estimates are much higher. The total take of 577 elephants produced $784,750 in license fees and taxes, almost all of which was used in the affected countries' conservation programs. The same 577 elephants contributed $9,079,150 to the economies of the affected countries, an average of $14,373 per elephant." H.R. Rep. No. 96-661, Part 1, 96th Cong., 1st Sess. 13 (1979).

The Safari Club International supports the Endangered Species Act as an appropriate tool to conserve and protect wildlife resources.

Yet, since sportsmen are conservationists and the purpose of the Endangered Species Act is to conserve wildlife resources, it would appear that the statute would be perfectly compatible with lawful activities by sportsmen to conduct and stimulate such conservation measures. Unfortunately, though, this is not always the case as the Endangered Species Act does present some troublesome and unnecessarily complicating problems to sport hunters. Some of these situations have evolved into perplexing dilemmas. Therefore, SCI welcomes this opportunity to present our recommendations to this Subcommittee in a sincere effort to correct and alleviate these concerns.

As our first preference, SCI recommends amending the Endangered Species Act by limiting its scope to domestic species. This is certainly a viable option in light of the tremendous success and effectiveness of the Convention on International Trade on Endangered Species of Wild Fauna and Flora ("CITES"). This option would eliminate much of the unnecessary overlapping and duplication of efforts.

In the alternative, however, we have attached hereto, as part of our testimony, a number of proposed amendments which we respectfully request the Members of this Subcommittee to carefully consider during your legislative deliberations. Inasmuch as no amending legislation to the Endangered Species Act has yet been introduced during this session of Congress, SCI will be pleased, after our analysis of the expected legislation, to submit additional and revised recommendations to this Subcommittee in light thereof.

In some circles, it could be argued that the purposes of our proposed amendments might be better satisfied in an administrative fashion. However, explicit recognition within the Endangered Species Act itself will go much further to dispel the omnipresent paranoia among sportsmen that their historical right to lawfully hunt is threatened whenever a new or revised regulation or statute looms on the horizon.

ENDANGERED SPECIES ACT
PROPOSED AMENDMENT NO. 1

Amend 16 U.S.C. 1532(2) by striking the present text, and substitute therefor:

> "The term 'commercial activity' means all activities of industry and trade, including, but not limited to, the buying or selling of fish or wildlife or plants and activities conducted for the purpose of facilitating such buying and selling: Provided, however, That it does not include --
>
> (A) exhibition of fish or wildlife or plants by museums or similar cultural or historical organizations; or
>
> (B) lawful dealings of a sport hunter with a taxidermist, guide, outfitter, travel agent, or an airline."

EXPLANATION

The proposed amendment, which we hereby respectfully submit to this Subcommittee, concerns the definition of the term "commercial activity."

It has been the longstanding policy of the Congress and the United States Department of the Interior to recognize properly that sport hunting does not constitute any commercial activity. Since the enactment of the Endangered Species Act, it has been determined that the "commercial" aspects of a sporting hunt, such as the payment of an outfitter, guide, taxidermist, travel agent, or airline also do not constitute commercial activity.

> "The 'commercial activity' portion of Section 4(d)(1) [of the recently enacted Lacey Act Amendments of 1981] does not encompass the dealings of a hunter with his taxidermist. Such dealings clearly do not constitute a sale or purchase of wildlife. Similarly, the dealings of a hunter with his travel agent or an airline

> to arrange a trip for the acquisition of wildlife clearly does not constitute a sale or purchase of wildlife." (S. Rep. No. 97-123, 97th Cong., 1st Sess. 12 (1981) and H.R. Rep. No. 97-276, 97th Cong., 1st Sess. 21 (1981)).

This is also reflected in Section 17.3 of the Endangered Species Regulations in which the phrase "industry or trade" is defined as the actual or intended transfer of wildlife from one person to another in pursuit of gain or profit. That definition further defines the term "commercial activity" as set out in Section 3 of the Endangered Species Act.

Thus, while the activities relating to sport hunting mentioned above have been determined and are regarded to be incidental to the primary purpose of the hunt, and not to constitute commercial activity in the sense of the Act, the statute, itself, has yet to incorporate such a distinction explicitly.

Whenever a regulation or rule is proposed or promulgated, there is recurring confusion within the sport hunting community as to any possible new applicability of the term "commercial activity" to sport hunting. Such ambiguity in these rules and regulations necessitates frequent requests by sportsmen and sport hunting organizations for a clarification regarding any reference to that term.

Since the proposed amendment is perfectly in line with the term "commercial activity," as it has been continuously interpreted by the Congress and the Department of Interior, the proposal is noncontroversial. As an added safeguard, however, the word "lawful" has been included in the proposal in order to draw a very clear line between legitimate and any possible illegal activity regarding sport hunting.

ENDANGERED SPECIES ACT
PROPOSED AMENDMENT NO. 2

Amend 16 U.S.C. 1532(3) by striking the present text after the word "transplantation," and substitute therefor:

> "...regulated sport hunting, and other
> regulated taking."

EXPLANATION

At the time of enactment of the statute, regulated takings were recognized as a useful and acceptable means to relieve population pressures. Yet, sport hunting was not recognized explicitly as such a conservation tool even though regulated sport hunting is utilized commonly as a means to protect and keep wildlife populations in check with their present habitat. Moreover, subsequent interpretations and policy determinations by the Department of Interior, as the Nation's principal conservation agency, have lent recognition to regulated sport hunting as an important wildlife conservation and management program. The purpose of the proposed amendment is to lend explicit and official recognition to the valuable role played by sport hunting as such a significant conservation tool.

Moreover, the definition of the terms "conserve," "conserving," and "conservation" in the statute makes a limited reference to relieving population pressures. However, the statute does not lend proper recognition of regulated sport hunting as a stimulant to wildlife conservation efforts.

In effect, if a resident wildlife species does not represent an economic or financial value to the landowner or farmer, then that species may come to be viewed as nothing more than vermin, and efforts could then be undertaken to remove the species as it may threaten nearby agricultural operations. The economic benefit received from sport trophy hunting (and its fees) represents the very incentive needed to persuade the landowner or farmer to manage the wildlife population and thereby protect the species from extermination in that area. In other words, sport hunting benefits species by giving economic value which, in turn, stimulates conservation measures.

ENDANGERED SPECIES ACT
PROPOSED AMENDMENT NO. 3

Amend 16 U.S.C. 1532(10) by striking the present text and substitute therefor:

> "The term 'import' means to land on, bring into, or introduce into, or attempt to land on, bring into, or introduce into, from any place not subject to the jurisdiction of the United States to any place subject to the jurisdiction of the United States, whether or not such landing, bringing, or introduction constitutes an importation within the meaning of the customs laws of the United States; Provided, however, that the term 'import' shall not include the transit or trans-shipment through any place subject to the jurisdiction of the United States of non-commercial shipments of sport hunting trophies of fish or wildlife lawfully exported from the country of origin or country of re-export and destined to a country where they may be lawfully received, while such sport hunting trophies remain in United States customs control."

EXPLANATION

Under the statute, the definition of the term "import" could be applied to movement of fish or wildlife or plants from Alaska (Hawaii, Guam, etc.) to the contiguous United States because of the nonapplicability of United States Customs law. Such a broad definition was apparently intended to cover situations in which certain wildlife, such as fowl or swine, are brought into this country and an "importation" within the meaning of the United States customs laws does not occur until the wildlife has undergone a quarantine period and has been cleared formally for entry by the U.S. Customs Service. (See S. Rep. No. 97-123, 97th Cong., 1st Sess. 5 (1981)).

The proposed amendment would eliminate any possible misapplication and discrimination of the term "import" to shipments from Alaska, etc. to the contiguous United States, while retaining the provision in the statute which provides for the quarantine importation periods in order to prevent outbreaks of disease, including Newcastles disease.

Secondly, it had been the policy of the United States Fish and Wildlife Service, in cooperation with the United States Customs Service, to seize non-commercial foreign shipments of sport hunting trophies which were taken legally in the country of origin, exported legally from the country of origin or re-export, and destined to a country where such sport hunting trophies may be lawfully received and possessed, if such species was listed as "endangered" under the Endangered Species Act. Such intransit foreign shipments through the United States had been considered to be in violation of the Endangered Species Act.

Recently, however, in recognition of such accidental landings of sport hunting trophies into the United States, the Department of the Interior issued new law enforcement directives which state that such non-commercial foreign shipments of sport hunting trophies of species listed as "endangered" under the Endangered Species Act intransit through the United States shall not be seized. (See Law Enforcement Memoranda 88, U.S. Department of the Interior, Sept. 4, 1981).

The proposed amendment would incorporate the new law enforcement directive into the statute. A similar and almost identical provision presently exists under the regulations implementing the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES Treaty). Under the proposed amendment, the right to inspection would be retained by the United States Fish and Wildlife Service.

ENDANGERED SPECIES ACT
PROPOSED AMENDMENT NO. 4

Amend 16 U.S.C. 1533(e) by striking the present text and substitute therefor:

> "The Secretary may list any species as an endangered species or a threatened species if such species so closely resembles in appearance, at the point in question, a species which has been listed pursuant to this section: Provided, however, that --
>
> (1) the best scientific and commercial data of such species available to him and after consultation, as appropriate with the affected States, interested persons and organizations, other interested Federal agencies, and, in cooperation with the Secretary of State, with the country or countries in which such species concerned is normally found or whose citizens harvest such species on the high seas, demonstrates that enforcement personnel would have substantial difficulty in attempting to differentiate between the listed and unlisted species;
>
> (2) the effect of this substantial difficulty is an additional threat to an endangered or threatened species;
>
> (3) such treatment of such species will substantially facilitate the enforcement and further the policy of this chapter; and
>
> (4) no other means for training law enforcement personnel to differentiate between the species involved are reasonably available."

EXPLANATION

Presently, there exists broad authority for the listing of species without documented regard to the true status of such species in question for no reason other than similarity of appearance. We do not object to listings for reason of similarity of appearance provided that such listings are the result of a thorough examination of the actual status of the species in question and its documented impact upon the species already listed. The proposed amendment regarding the listing of species for reason of similarity of appearance would continue to allow such listings pursuant to an examination of the best available scientific and commercial data on the species and pursuant to a study of its documented and expected impact upon a species already listed.

Moreover, it is reasonable to assume that the law enforcement personnel authorized to enforce the provisions of the statute should be capable of differentiating among species. The statute should serve as an incentive for the United States Fish and Wildlife Service to upgrade appropriately the training of its agents so that they may be even more capable of making proper differentiations among species. Hence, the proposed amendment requires the Secretary to evaluate whether reasonable training methods are available which would obviate the listing of look-alike species.

ENDANGERED SPECIES ACT
PROPOSED AMENDMENT NO. 5

Amend 16 U.S.C. 1538(b)(1) by striking the present text and substitute therefor:

> "The provisions of this section shall not apply to any fish or wildlife held in captivity or in a controlled environment on December 28, 1973, or on the effective date when such species of fish or wildlife is first listed by the Secretary pursuant to final regulation, if the purposes of such holding are not contrary to the purposes of this chapter; except that this subsection shall not apply in the case of any fish or wildlife held in the course of a commercial activity. With respect to any act prohibited by this section which occurs after a period of 180 days from December 28, 1973, or after a period of 180 days from the effective date of such first listing, as the case may be, there shall be a rebuttable presumption that the fish or wildlife involved in such act was not held in captivity or in a controlled environment on December 28, 1973."

EXPLANATION

Presently, it is possible that an argument could be made that if a species is listed as "endangered" under the Endangered Species Act for the first time in 1982, the prohibitions pursuant to Section 1538(a) of this title could apply to such species effective December 28, 1973 as opposed to the date of its actual first-time listing. Hence, the proposed amendment merely seeks to clarify the statute to ensure that it is consistent with notions of due process and the prohibition against ex post facto laws.

ENDANGERED SPECIES ACT
PROPOSED AMENDMENT NO. 6

Amend 16 U.S.C. 1538 by adding new clause (b)(3):

> "Except as prohibited by subsection (c)(1), this section shall not apply to sport hunting trophies of fish or wildlife taken lawfully as part of a conservation or management or culling program maintained for purposes not contrary to the purposes of this chapter; Provided, however, if such fish or wildlife is not subject to the provisions of subsection (c)(1) but is listed as an endangered species pursuant to section 1533 of this title, then the provisions of this section shall apply to such fish or wildlife, except as provided in section 1535(g)(2) and 1539 of this title."

EXPLANATION

At the present time, there are many wildlife species which are listed as "endangered" under the Endangered Species Act which may be legally taken by a sport hunter in the country of origin, and may be legally exported from the country of origin or the country of re-export, as part of a wildlife conservation, management or culling program. However, due to the listing of the species as "endangered" under the United States statute, any importation into the United States of the sport hunting trophies of such species is prohibited.

Two examples of foreign species listed as "endangered" under the Endangered Species Act which may be legally taken as sport hunting trophies from game-breeding ranches in South Africa are the bontebok antelope and the southern white rhinoceros. Recently, the United States Fish and Wildlife Service began a review procedure of applications for the importation of sport hunting trophies of both species. Provided such trophies were legally taken from the aggressive and highly successful breeding programs in South Africa, such permit applications are being approved. Moreover, the leopard is an example of a non-captive foreign species which is listed as "endangered" under the Endangered Species Act which may be legally taken as sport hunting trophies throughout many of the nations of sub-Saharan Africa.

The proposed amendment gives recognition to the conservation effects of sport trophy hunting without impinging upon the international obligations of the United States under the Convention on International Trade in Endangered Species of Wild Fauna and Flora ("CITES Treaty"). In the case where a species is listed as "endangered" under the Endangered Species Act and is also listed under the CITES Treaty, ownership of a sport hunting trophy of such species would be restricted to instances where the proper permit pursuant to the regulations of the CITES Treaty has been obtained. In the rare case where a species is listed as "endangered" under the Endangered Species Act but is not listed under the CITES Treaty, ownership of a sport hunting trophy of such species would be restricted to instances where the proper permit has been obtained from the Secretary.

In any event, in recognition of the valuable conservation effects of sport hunting, it is only legally taken sport hunting trophies which are involved. It is hoped that the effect of the

ENDANGERED SPECIES ACT
PROPOSED AMENDMENT NO. 7

Amend 16 U.S.C. 1538(g) by striking the present text and substitute therefor:

> "It is unlawful for any person subject to the jurisdiction of the United States to attempt to commit any offense defined in this section."

EXPLANATION

The proposed amendment would make the Endangered Species Act analagous to Section 3(a)(5) of Public Law 97-79 (the Lacey Act Amendments of 1981) by deleting language on solicitation and causation as such provisions are unnecessarily repetitious of Section 2(b) of title 18, United States Code. proposed amendment would be to encourage foreign nations particularly to undertake aggressive wildlife management efforts to stimulate conservation programs in those nations.

ENDANGERED SPECIES ACT
PROPOSED AMENDMENT NO. 8

Amend 16 U.S.C. 1540(a)(1) by striking the last sentence therein and substitute therefor:

> "...The court shall have jurisdiction to hear and decide any such action. In hearing such action, the court shall have authority to review the violation and the assessment of the civil penalty de novo."

EXPLANATION

At the present time, the Endangered Species Act uses a substantial evidence rule but as the debate on Public Law 97-79 (the Lacey Act Amendments of 1981) made clear, the Congress found merit in the position that the court should be able to make its own determination of fact. The purpose of the proposed amendment is to conform the proceedings of civil penalty review in the Endangered Species Act to that section in Public Law 97-79.

December 15, 1981

29900 Highway 20
Fort Bragg, California 95437

Hon. John H. Chafee, Chairman
Environmental Pollution Subcommittee
Environment and Public Works Committee
Senate Office Building
Washington, D.C. 20510

FOR THE PUBLIC RECORD - ENDANGERED SPECIES ACT OVERSIGHT

Dear Mr. Chafee and members of the Committee:

As a conservationist involved for many years now with endangered species, I appreciate this opportunity to comment on the strengths, shortcomings, and necessity of the Endangered Species Act.

As a lover of the diversity and wonder of the planetary lifeforms, I commend the Endangered Species Act to you as one of the best tools that we have for saving endangered, threatened, depleted, and sensitive species - and preserving the diversity of species so necessary for a healthy planetary ecosystem.

But the Endangered Species Act goes farther than this in its value to everyone. We are beginning to realize that habitat degradation so severe as to endanger other lifeforms points directly to the loss of habitat for the most endangered species of all - humankind.

Like the proverbial canary in the coalmine, the bellwhether workings of the Endangered Species Act warn us all of habitat degradation and coming disaster. Habitat degradation and extinction of some lifeforms cannot be ignored by others. We are all passengers on spaceship earth together, and are all necessary parts of the web of life.

In its most basic function of working to preserve the life support system itself, the Endangered Species Act needs to be strengthened, not weakened.

It seems clear that the review, evaluation, strengthening, and reauthorization of the basic goals and purposes, and implementing procedures, of the Act are too important to be left to the vagaries of federal agency politics. The current disastrous environmental policies, and lack of respect for life, coming from the highest levels of the present Department of the Interior provide an outstanding example of this.

Accordingly, I would like to urge the Congress to maintain its Endangered Species Act oversight responsibilities, and all members of the Senate Environment and Public Works Committee to work for reauthorization and strengthening of this vitally important legislation.

Thank you for your consideration.

Ron Guenther
Sierra Club - Redwood Chapter Executive Committee
Mendocino Environment Center - Board of Directors

Copies to: Senator Alan Cranston
Senator S.I. Hayakawa
Rep. Don H. Clausen

MRS RICHARD C STEVENSON
9211 LAKESIDE AVE
ANGOLA NY 14006

Angola, N. Y.

Dec. 14, 1981

Hon. John H. Chafee, Chmn.
Environmental Pollution Subcommittee
Environment and Public Works Committee
Senate Office Blg. Washington DC 20510

Dear Chairman,

Mr. Stevenson and I believe there is great merit to the Endangered Species Act because it protects those creatures which have shown visible signs of reduction, and once a species shows such signs, many times it is almost impossible to save the species from total depletion.

We all believe our wild life is important to us, and we all believe the human race has an obligation to keep all species of wildlife from becoming extinct. We have not had too good a record of this if one reviews the number on the extinct list. It is a sad commentary.

Thus, it is healthy to have this question aired at a hearing to let people discuss this intelligently, learning from the past.

We ask that the mandated regulations be Promulgated by the Dept. of Interior to implement the 1978 Amendments to Sec. 7 of the Endangered Species Act. We request these regulations to be forthcoming Soon.

Kindly make this letter part of the Hearing. We want the Endangered Species Act honored & observed.

Very truly yours, Mrs. Richard C. Stevenson

Dec. 14, 1981

Hon. John H. Chafee, Chairman
Environmental Pollution Subcommittee
Environment and Public Works
Committee
Senate Office Building:
Washington, D. C. 20510

For the Record of the Hearing on the Endangered Species Act.

Dear Mr. Chairman:

It is our sincere hope that the Endangered Species Act will remain intact, and will continue to function but in a much more efficient manner than it has in the past.

In view of the tragic and threatening conditions with which so many of the species are now faced, we are unquestionably in need of strict supervision and a dedicated enforcement of the rules and regulations contained in this excellent Law.

We sincerely suggest that Congress review and appraise the needs for improving and strengthening the Endangered Species Act, plus recognizing the imperative necessity for more strict and dedicated implementation.

Thanking you for your kind attention, we are,

Sincerely,

Mr. + Mrs. Charles E. Stuart
Mr. & Mrs. Charles E. Stuart
4833 Castle Rd
La Canada, Calif. 91011

THE ECONOMICS OF RED-COCKADED WOODPECKER MANAGEMENT

GEORGE A. GEHRKEN, Union Camp Corporation, Savannah, Georgia 31402

Non-Game & Endangered Wildlife Symposium
Athens, Georgia
August 13 & 14, 1981

Abstract: The management of two hundred acres of site quality 60, 60-80 year-old loblolly pine, 60 sq/ft. (5.7 M^2) basal area per acre, is projected for a 75-year imperfect rotation for Red-cockaded Woodpeckers. The same stand is managed for 75 years in three 25-year rotations. (The long rotation yields $115.00 less per acre per year). ($284. hectare//year).

To assist persons and organizations interested in Red-cockaded woodpecker (Picoides borealis) management, this information is being presented. Many articles have been written on the management of this unique woodpecker. However, information is lacking in the literature concerning the cost of managing a timber stand for this bird. This endangered species can survive only where long rotation pine forest management is practiced. The paper will compare the income generated from the required long rotation with the income expected from even-age short rotation forest management.

The 75-year imperfect rotation used is based upon the management suggestions of the National Recovery Team for the Red-cockaded Woodpecker, Hooper, Robinson and Jackson (1980) and USDA Forest Service Wildlife Management Handbook (1978 Amended). This rotation for the Red-cockaded Woodpecker is designed to produce the maximum income while still providing adequate habitat for the bird.

I wish to acknowledge the assistance and council of J. G. Hamner, H. L. Holbrook, C. T. Johnson, and C. D. Roberts in the preparation of this paper. Without their help, the paper would have been an impossibility.

To compare the income produced by managing pine timberland for Red-cockaded Woodpeckers and short rotation forest management, the following assumptions are made:

1. A colony of woodpeckers is living on a 200-acre (80.9-hectare) upland tract of 60-80 year old loblolly pine (*Pinus taeda*). The site quality of this tract is 60 (at 25 years), the basal area is 60 sq. ft. per acre (14.1 Sq. M. per hectare).
2. By the use of a flight corridor system and the schematic diagram (Fig. 1), the foraging area, recruitment stand, and colony site can be connected throughout the entire rotation.
3. The stumpage price begins at \$75 a cord (\$20.60 M^3) sawtimber, \$45 a cord (12.41 M^3) chipping saw material and \$20 a cord (5.5 M^3) for pulpwood. These prices will increase 5% per year.
4. The taxes will begin at \$2.50 an acre/year (\$6.18 a hectare/year) and management costs will be \$4.00 an acre/year (\$9.88 a hectare/year). Both will increase 3% per year.
5. All income will be invested at 5% interest compounded annually.
6. The timber stands will grow at 1.8 cords/acre (16.1 M^3/hectare) 1-25 years, 750 stems/acre, and 1.5 cords/acre (13.4 M^3/hectare, 1-35 years 500 stems/acre) as in Smalley and Bailey (1974). Subsequent growth rates are set at .5 cords/acre (4.5 M^3/hectare) 35-60 years; and .2 cords/acre (1.8 M^3/hectare) per year for 60 years and older.
7. The initial price for wood clear cut from the mature stands will be \$70.00/cord because there will be a small amount of pulpwood in tops and odd trees. The initial price for the light thinnings, 2.5 cords/acre in the mature stand, will be \$45.00/cord. The price for stumpage in the small 15-year-old pines will be \$20/cord. The initial price for heavy thinnings (20 cd/acre) in the 35-year-old stands will be \$45/cd. The heavy thinnings 55 years and older will be \$70/cord. The initial cost of regenerating the timberland will be \$100 acre (\$247.10 hectare) and increasing 3% per year.

The presence of the colony is assumed to be in stand D (Fig. 1) and that stand will be used for the recruitment area until stand A reaches 60 years of age.

The forest management plan (Fig. 2) consists of clear cutting A, and thinning B, C, & D at year 0; then site preparing and planting A during that year with 500 stems/acre. During the 15th year a thinning of stand A, 3 cords/acre is made. During the 20th year stand B is clear cut and planted. During the 35th year of the rotation, the thinning of stands A, B, and D is in order. Stand C is clear cut and planted in the 40th year. During year 55, stands A, B, and C are thinned. During the 60th year, thirty acres of stand D is clear cut and planted; the recruitment stand is moved from D to A. The next harvest is in year 75 when the old colony stand D of 20 acres will be cut along with 30 acres of stand A. Stands B and C will be thinned at this time. Care must be taken to connect the colony site with corridors to B and D.

The management plan for the short rotation includes clear cutting the entire tract, preparing the site and planting 750 stems of loblolly pine per acre. The growth of [illegible].8 cords/acre is projected to be one-half pulpwood and half chipping saw or $32.50/cord and 45.9 cords/acre.(1) This rotation is completed three times during the 75 years.

Selling the timber and investing the income for the 75-year rotation yields $28,992,648 . This entire area is regenerated and still supporting a colony of Red-cockaded woodpeckers. For detailed calculations, see Appendix 1.

The short rotation yielded $46,363,033 or $17,370,385 more.

To subsidize the long rotation sufficiently to equal the short rotation income would require an investment of $22,957 a year at 5% interest or $115.00 per acre annually. ($284. hectare/year)

(1) All peeled cubic volumes from Smalley and Bailey are converted to standard cords by dividing by 75 ft ^{3}/cord.

It is difficult to visualize that it costs $115 per acre or about $3,826 per bird annually to manage for Red-cockaded Woodpeckers. The primary reason for this hugh cost is the $1,925 tied up in an acre of mature timber. The annual income from this amount of money at five percent interest is $96.25. The secondary reason for this cost is that an old stand sixty years old and older grows at approximately 0.2 cords per acre per year (allowing for expected mortality) while a young stand grows at the rate of 1.5 to 1.8 cords/acre per year. This paper does not recommend long or short rotations. The objectives of the timberland owner generally dictate the forest management practice utilized.

Literature cited

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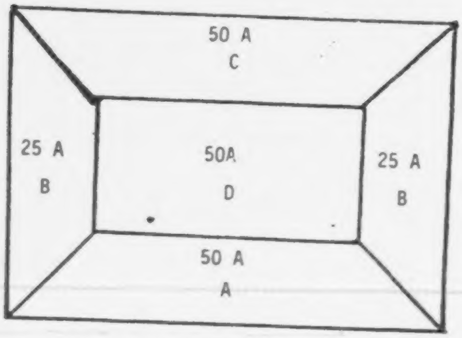
Smalley, G. W. and R. L. Bailey, 1974. Yield tables and stand structure for loblolly pine plantations in Tennessee, Alabama, and Georgia highlands, U.S.D.A. Forest Service Experiment Station. New Orleans, LA. 81 pp.

U.S.D.A. Forest Service, 1978 AMEND. Wildlife habitat management handbook, Atlanta, GA. 189 pp.

FIGURE 1

200 Acre Loblolly Pine

60-80 yr., 60 ft^2/A, S. Q. 60



27.5 C/A

FIGURE 2

MANAGEMENT SCHEDULE FOR
RED-COCKADED WOODPECKER TIMBER ROTATION

YEAR	STAND AGE & TREATMENT			
	A	B	C	D
0	CC - P 60 - 80	T 60 - 80	T 60 - 80	T 60 - 80
15	T 15	-	-	-
20	-	CC - P 80 - 100	-	-
35	T 35	T 15	-	T 95 - 115
40	-	-	CC - P 100 - 120	-
55	T 55	T 35	T 15	-
60	-	-	-	CC - P 120 - 140 (P) 20A
75	CC - P (P) 30A 75	T 55	T 35	CC - P 135 - 155 (P) 20A

CC - Clearcut
P - Plant
(P)- Part
T - Thinn
35 - Age

200 ACRE, 75 YEAR IMPERFECT ROTATION FOR RED-COCKADED WOODPECKERS

ITEM	YEAR	HARVEST AGE	ACRES	CDS/ACRE TO HARVEST	TOTAL CORDS HARVESTED	VALUE CDS/ACRE	TOTAL HARVEST VALUE	REG. COST	ANNUAL MGMT. TAX.COST	NET CASH FLOW	BALANCE AND INTEREST	CURRENT BALANCE	ACRES REG.	TAXES $2.50	MGMT. COSTS $4.00	REG COST @ $100
							5%				5%				3%	
CC & P A	0	60-80	50	27.5	1,375	70 ST	96,250	- 5,000	- 1,300	106,825		106,825	50	6.50		100
T BCD			150	2.5	375	45 T	16,875									
T A	15	15	50	3.0	150	42 PW	6,237	0	- 30,380	- 24,143	222,082	197,939				
CC B	20	80-100	50	31.5	1,575	186 ST	292,850	- 9,050	- 11,740	272,160	252,625	524,785	50		181	
T ABD	35	35	50	20.0	1,000	248 T	248,000									
		95-115	50	7.0	350	248 T	86,800									
		15	50	3.0	150	110 PW	16,500	0	- 54,870	296,430	1,090,991	1,387,421				
CC C	40	100	50	33.0	1,650	493 ST	813,450	-16,300	- 21,203	775,947	1,770,740	2,546,687	50		326	
		120														
T ABC	55	TA 55	50	20.0	1,000	1,024 ST	1,024,000									
		TB 35	50	20.0	1,000	654 T	654,000									
		TC 15	50	3.0	150	293 PW	43,950	0	- 99,102	1,622,848	5,294,379	6,917,227				
CC (P) D	60	120	30	30.0	900	1,308 ST	1,177,200	-17,670	- 38,295	1,121,235	8,828,329	9,949,564	30		589	
		140														
CC (P) D	75	135	20	32.0	640	2,718 ST	1,739,520	-45,900	-178,989	8,308,219	20,684,429	28,992,643	20			
		155											30		918	
CC (P) A		75	30	27.7	831	2,718 ST	2,258,658									
T (P) D		15	30	3.0	90	777 PW	69,930									
T BC		TB 55	50	20.0	1,000	2,718 ST	2,718,000									
		TC 35	50	20.0	1,000	1,747 T	1,747,000									

200 ACRES, (3), 25 YEAR ROTATIONS

ITEM	YEAR	HARVEST AGE	ACRES	CDS/ACRE TO HARVEST	TOTAL CORDS HARVESTED	VALUE CDS/ACRE	TOTAL HARVEST VALUE	REG. COST	ANNUAL MGMT. TAX.COST	NET CASH FLOW	BALANCE AND INTEREST	CURRENT BALANCE	ACRES REG.	TAXES $2.50	MGMT. COSTS $4.00	REG COST @ $100
CC P All	0	60-80	200	27.5	5,500	70 ST	385,000	-20,000	- 1,300	363,700	363,700	363,700		6.50		100
CC P All	25	25	200	45.9	9,180	110 PW	1,009,800	-41,800	- 68,048	899,952	1,231,617	2,131,569				209
CC P All	50	25	200	45.9	9,180	373 PW	3,424,140	-87,600	-142,477	3,194,063	7,218,250	10,912,313				438
CC P All	75	25	200	45.9	9,180	1,262 PW	11,585,160	-183,600	-298,315	11,103,245	35,259,788	46,363,033				

46,363,033 (3) 25-yr.rotation
20,992,648 (1) 75-yr. imp. rotation
17,370,385 Difference

CC = Clear Cut
P = Plant
(P) = Part
T = Thinn
A = Stand designation
ST = Saw Timber
PW = Pulp Wood

$$17{,}370{,}385 = X\left(\frac{(1.05)^{75}-1}{.05}\right)$$

$$= X\left(\frac{38.83-1}{.05}\right)$$

$$= 756.65X$$

$$\$22{,}957 = X$$

$115/AC/YR

APPENDIX 1

200 ACRE, 75 YEAR IMPERFECT ROTATION FOR RED-COCKADED WOODPECKERS

SITE QUALITY 50

ITEM	YEAR	HARVEST AGE	ACRES	CDS/ACRE TO HARVEST	TOTAL CORDS HARVESTED	VALUE CDS.	TOTAL HARVEST VALUE	REG COST	ANNUAL MGMT. TAX.COST	NET CASH FLOW	BALANCE AND INTEREST	CURRENT BALANCE	ACRES REG.	TAXES $2.50	MGMT. COSTS $4.00	REG.COST @ $100
							5%				5%				3%	
CC & P A T BCD	0	60-80	50 150	22.5 2.0	1,125 300	70 ST 45 T	78,715 13,500	- 5,000	- 1,300	85,915		85,915	50	6.50		100
T A	15	15	50	2.0	100	42 PW	4,200	0	- 30,380	- 26,180	178,611	152,431				
CC B	20	80-100	50	23.7	1,185	186 ST	220,410	- 9,050	- 11,740	199,620	194,545	394,165	50		181	
T ABD	35	35 95-115 15	50 50 50	10.0 5.6 2.0	500 280 100	248 T 248 T 110 PW	124,000 69,490 11,000	0	- 54,870	149,570	819,441	969,011				
CC C	40	100 120	50	26.9	1,345	493 ST	663,085	-16,300	- 21,203	625,582	1,236,731	1,862,313	50		326	
T ABC	55	TA 55 TB 35 TC 15	50 50 50	10.0 10.0 2.0	500 500 100	1,024 ST 654 T 293 PW	512,000 327,000 29,300	0	- 99,102	769,198	3,871,614	4,640,812				
CC (P) D	60	120 140	30	26.5	795	1,308 ST	1,039,860	-17,670	- 38,295	983,895	5,922,993	6,906,878	30		589	
CC (P) B	75	135 155	20	28.9	578	2,718 ST	1,571,004	-45,900	-178,989	5,753,426	14,358,903	20,112,329	20 30		918	
CC (P) A T (P) D T BC		75 15 TB 55 TC 35	30 30 50 50	26.1 2.0 10.0 10.0	783 60 500 500	2,718 ST 777 PW 2,718 ST 1,747 T	2,128,194 46,620 1,359,000 873,500									

200 ACRES, (3), 25 YEAR ROTATIONS - SITE QUALITY 50

ITEM	YEAR	HARVEST AGE	ACRES	CDS/ACRE TO HARVEST	TOTAL CORDS HARVESTED	VALUE CDS.	TOTAL HARVEST VALUE	REG COST	ANNUAL MGMT. TAX.COST	NET CASH FLOW	BALANCE AND INTEREST	CURRENT BALANCE	ACRES REG.	TAXES $2.50	MGMT. COSTS $4.00	REG.COST @ $100
CC P All	0	60-80	200	22.5	4,500	70 ST	315,000	-20,000	- 1,300	293,700	0	293,700		6.50		100
CC P All	25	25	200	32.0	6,400	110 PW	704,000	-41,800	- 68,048	594,152	994,572	1,588,724				209
CC P All	50	25	200	32.0	6,400	373 PW	2,387,200	-87,600	-142,477	2,157,123	5,379,985	7,537,108				438
CC P All	75	25	200	32.0	6,400	1,262 PW	8,076,800	-183,600	-298,315	7,594,685	25,523,323	33,118,008 20,117,329 13,005,679	(3) 25-yr. rotation (1) 75-yr. rotation Difference			

CC = Clear Cut
P = Plant
(P)= Part
T = Thin
A = Stand designation
ST = Saw Timber
PW = Pulp Wood

$$13,005,679 = X\left(\frac{(1.05)^{75}-1}{.05}\right)$$

$$= X\left(\frac{38.83-1}{.05}\right)$$

$$= 756.65X$$

$$\$17,188 = X$$

200 ACRE, 75 YEAR IMPERFECT ROTATION FOR RED-COCKADED WOODPECKERS
SITE QUALITY 60

ITEM	YEAR	HARVEST AGE	ACRES	CDS/ACRE TO HARVEST	TOTAL CORDS HARVESTED	VALUE CDS/ACRE	TOTAL HARVEST VALUE	REG. COST	ANNUAL MGMT. TAX.COST	NET CASH FLOW	BALANCE AND INTEREST	CURRENT BALANCE	ACRES REG.	TAXES $2.50	MGMT. COSTS $4.00	REG. COST @ $100
							5%				5%				3%	
C & P A	0	60-80	50	27.5	1,375	70 ST	96,250	- 5,000	- 1,300	106,825		106,825	50	6.50		100
BCD			150	2.5	375	45 T	16,875									
A	15	15	50	3.0	150	42 PW	6,237	0	- 30,380	- 24,143	222,082	197,939				
C B	20	80-100	50	31.5	1,575	186 ST	292,850	- 9,050	- 11,740	272,160	252,625	524,785	50		181	
ABD	35	35	50	20.0	1,000	248 T	248,000									
		95-115	50	7.0	350	248 T	86,800									
		15	50	3.0	150	110 PW	16,500	0	- 54,870	296,430	1,090,991	1,387,421				
C C	40	100	50	33.0	1,650	493 ST	813,450	-16,300	- 21,203	775,947	1,770,740	2,546,687	50		326	
		120														
ABC	55	TA 55	50	20.0	1,000	1,024 ST	1,024,000									
		TB 35	50	20.0	1,000	654 T	654,000									
		TC 15	50	3.0	150	293 PW	43,950	0	- 99,102	1,622,848	5,294,379	6,917,227				
C (P) D	60	120	30	30.0	900	1,308 ST	1,177,200	-17,670	- 38,295	1,121,235	8,828,329	9,949,564	30		589	
		140														
C (P) D	75	135	20	32.0	640	2,718 ST	1,739,520	-45,900	-178,989	8,308,219	20,684,429	28,992,643	20			
		155														
C (P) A		75	30	27.7	831	2,718 ST	2,258,658						30		918	
(P) D		15	30	3.0	90	777 PW	69,930									
BC		TB 55	50	20.0	1,000	2,718 ST	2,718,000									
		TC 35	50	20.0	1,000	1,747 T	1,747,000									
200 ACRES, (3), 25 YEAR ROTATIONS																
C P All	0	60-80	200	27.5	5,500	70 ST	385,000	-20,000	- 1,300	363,700	363,700	363,700				
C P All	25	25	200	45.9	9,180	110 PW	1,009,800	-41,800	- 68,048	899,952	1,231,617	2,131,569		6.50		100
C P All	50	25	200	45.9	9,180	373 PW	3,424,140	-87,600	-142,477	3,194,063	7,218,250	10,912,313				209
C P All	75	25	200	45.9	9,180	1,262 PW	11,585,160	-183,600	-298,315	11,103,245	35,259,788	46,363,033				438

46,363,033	(3) 25-yr. rotation
28,992,648	(1) 75-yr. imp. rotation
17,370,385	Difference

CC = Clear Cut
P = Plant
(P) = Part
T = Thinn
A = Stand designation
ST = Saw Timber
PW = Pulp Wood

$$17{,}370{,}385 = X\left(\frac{(1.05)^{75}-1}{.05}\right)$$

$$= X\left(\frac{38.83-1}{.05}\right)$$

$$= 756.65X$$

$22,957 = X

$115/AC/YR

200 ACRE, 75 YEAR IMPERFECT ROTATION FOR RED-COCKADED WOODPECKERS

SITE QUALITY 70

ITEM	YEAR	HARVEST AGE	ACRES	CDS/ACRE TO HARVEST	TOTAL CORDS HARVESTED	VALUE CDS/	TOTAL HARVEST VALUE	REG. COST	ANNUAL MGMT. TAX.COST	NET CASH FLOW	BALANCE AND INTEREST	CURRENT BALANCE	ACRES REG.	TAXES $2.50	MGMT. COSTS $4.00	REG.COST @ $100
							5%				5%				3%	
CC & P A T BCD	0	60-80	50 150	32.5 3.0	1,625 450	70 ST 45 T	113,750 20,250	- 5,000	- 1,300	127,700		127,700	50	6.50		100
T A	15	15	50	4.0	200	42 PW	8,400	0	- 30,380	- 21,980	265,479	243,499				
CC B	20	80-100	50	34.3	1,715	186 ST	318,990	- 9,050	- 11,740	298,200	310,773	608,973	50		181	
T ABD	35	35 95-115 15	50 50 50	30.0 8.4 4.0	1,500 420 200	248 T 248 T 110 PW	372,000 104,160 22,000	0	- 54,870	443,290	1,266,012	1,709,302				
CC C	40	100 120	50	39.4	1,970	493 ST	971,210	- 16,300	- 21,203	933,707	2,181,551	3,115,258	50		326	
T ABC	55	TA 55 TB 35 TC 15	50 50 50	25.0 30.0 4.0	1,250 1,500 200	1,024 ST 654 T 293 PW	1,280,000 981,000 38,600	0	- 99,102	2,319,600	6,476,397	8,795,997				
CC (P) D	60	120 140	30	35.5	1,065	1,308 ST	1,393,020	- 17,670	- 38,295	1,337,055	11,226,159	12,563,224	30		589	
CC (P) D	75	135 155	20	39.1	782	2,718 ST	2,125,476	- 45,900	-178,989	10,360,178	26,118,040	36,478,219	20			
CC (P) A T (P) D T BC		75 15 TB 55 TC 35	30 30 50 50	28.8 4.0 25.0 30.0	864 120 1,250 1,500	2,718 ST 777 PW 2,718 ST 1,747 T	2,348,352 93,240 3,397,500 2,620,500									

200 ACRES, (3), 25 YEAR ROTATIONS - SITE QUALITY 70

ITEM	YEAR	HARVEST AGE	ACRES	CDS/ACRE TO HARVEST	TOTAL CORDS HARVESTED	VALUE CDS/	TOTAL HARVEST VALUE	REG. COST	ANNUAL MGMT. TAX.COST	NET CASH FLOW	BALANCE AND INTEREST	CURRENT BALANCE	ACRES REG.	TAXES $2.50	MGMT. COSTS $4.00	REG.COST @ $100
CC P All	0	60-80	200	32.5	6,500	70 ST	455,000	- 20,000	- 1,300	433,700	0	433,700		6.50	100	
CC P All	25	25	200	59.2	11,840	110 PW	1,302,400	- 41,800	- 68,048	1,192,552	1,468,662	2,661,214			209	
CC P All	50	25	200	59.2	11,840	373 PW	4,416,320	- 87,600	-142,477	4,186,243	9,011,816	13,198,059			438	
CC P All	75	25	200	59.2	11,840	1,262 PW	14,942,000	-183,600	-298,315	14,460,165	44,693,311	59,153,476				

59,153,476 (3) 25-yr. rotation
36,478,219 (1) 75-yr. rotation
22,675,257 Difference

CC = Clear Cut
P = Plant
(P)= Part
T = Thin
A = Stand designation
ST = Saw Timber
PW = Pulp Wood

$$22{,}675{,}257 = X\left(\frac{(1.05)^{75}-1}{.05}\right)$$

$$= X\left(\frac{38.83-1}{05}\right)$$

$$= 756.65X$$

$$\$29{,}968 = X$$

$150/AC/YR

Weyerhaeuser Company

Tacoma, Washington 98477
(206) 924-2345

November 25, 1981

Robert L. Carlton
National Forest Products Association
1619 Massachusetts Avenue, N. W.
Washington, D. C. 20036

Dear Mr. Carlton:

Two aspects of the Endangered Species Act have measurably impacted Weyerhaeuser Company timberland operations.

The first impact is the "multiplier" effect of the federal program encouraging additional local legislation through the active promotion and funding of State endangered species programs. Weyerhaeuser timberlands are located primarily in seven states, all of which have programs providing general wildlife protection at least four of which have specific endangered species programs, and three of which have endangered species agreement with the U.S. Fish and Wildlife Service. Though the federal act does not specifically regulate most activities on nonfederal lands, assumption has developed in the attitudes of many that any state and local government has not only that right but that responsibility. Increasingly the tenets of the Act are reflected in State and local programs and policies having far broader application than originally intended.

The second impact arises from the ambiguity in the definition of the term "taking." The recently issued regulations "taking" endorse the concept that habitat modification which impairs essential behavioral patterns (breeding, feeding, and sheltering) results in the actual death or injury to a listed species. The Company certainly has no desire to willfully destroy a threatened or endangered species. However our normal business practices necessarily do cause a vegetative change, which may leave us open to accusations focusing on habitat modification. Although we do not agree that otherwise legitimate private land use activities constitute a "taking", to prevent possible recriminations we have imposed voluntaryrestrictions on our operations to protect known nesting sites at quite a cost to us.

In our Western Regions, most of our efforts have been directed at protecting the nests and nesting sites of Bald Eagles. To date this has amounted to:

Oregon -	65 nests within 31 nesting sites

Washington - 15 nests
within 10 nesting sites

These nesting sites can range from 3 to 40 acres and involve mature-to-old growth timber. At this point we have 900 acres set aside for Bald Eagle nesting sites and these acres are growing. At estimated timber values this is a minimum cost of $9 million in unharvested timber. Management costs entail at least 1.0 man years/year and operational costs include the difficulty of logging around a leave block as well as the additional effort to coordinate the logical.timing of harvest with the biological patterns of a species. In our southern regions we have identified 22 colonies of Red Cockaded Woodpecker. 155 acres are reserved or about $115,000 of lost value. In addition approximately 100 man-days are necessary in the program administration.

Legislative changes can serve to alleviate the second, and more serious, of these impacts. The Act should define "taking" to be more consistent with the historial interpretation of the term: intentional death or injury directly to living specimens of listed species. The inclusion of the word "actual" before "kills or injures" in the Fish & Wildlife Service's definition is an improvement in the wording but ambiguities remain; for example, at what level is an essential behavioral pattern significantly impaired? Clarification in the language of the Act would serve to lessen the burden of protection for private landowners while still retaining the Act's intentions.

John P. McMahon

John McMahon

dh

Wickes Forest Industries
A Division of The Wickes Corporation

P. O. BOX 153 GRANGEVILLE, IDAHO 83530
TELEPHONE (208) 983-1290

November 25, 1981

Mr. Robert L. Carlton
National Forest Products Association
1619 Massachusetts Avenue N.W.
Washington D.C. 20036

Dear Mr. Carlton:

In response to your request for comments on how the Endangered Species Act is having an adverse impact on the Forest Industries, I have two recent examples on the Nezperce National Forest:

1. Appeal of Decision to Build Jersey Jack Road in August 1981 by D.J. Grim and intervention by Idaho Wildlife Federation and the Idaho Environmental Council. The Statement of Reasons submitted claimed the decision by the Forest Service violates the Endangered Species Act. It claims that the action will have detrimental effects upon critical habitat for both Grizzly Bears and the Rocky Mountain Grey Wolf. Except for statements from one of the environmentalists supporting the action that he has seen both species within the area, we know of no one who has ever seen either of these animals within the area in question.

   The appeal has already had an adverse impact on the local economy. The Forest Service lost a $1,200,000.00 appropriation to build this road in 1981 and 1982. Idaho County has already been seriously affected by the current depressed lumber market. This action eliminated financing for some much needed employment in the County.

2. Appeal of Environmental Assessment and Notice of Decision, Soda Point-Four Mile Area on the Nezperce National Forest by the Idaho Environmental Council, Inc., in September 1981. The appellants state that the Forest Service has inadequately assessed the impact of the proposed timber sale upon endangered and threatened species. They base this upon the assumption that there may be bald eagles, peregrine falcons, and grey wolves in the area.

   These appeals will have adverse effects upon the local economy. They will threaten and delay a continuous and dependable timber sale program on the Nezperce National Forest. The communities of Grangeville, Riggins, Elk City, Kooskia, and Kamiah are dependent upon timber from the Nezperce National Forest for their economic existence. Mills in these communities directly employ approximately 500 to 600 loggers and millworkers, and provide indirect employment to an additional 1000 to 1200 people in these communities. Environmental groups have threatened to appeal every proposed entry into the many RARE II roadless areas on the Nezperce National Forest.

The Endangered Species Act is only one of the many Federal laws used by environmental groups to threaten and delay orderly development of National Forest lands. Unfortunately, the real victims of their actions are the common working man and his dependents, county school and road budgets, and the rural economy dependent upon National Forest timber for their economic survival.

Very truly yours,

Jeffrey A. Gerfen

for
DONALD E. MacKENZIE
Woods Manager

DEM:jv

cc: Dave Edgerton

June 26, 1981

Mr. Robert L. Carlton
National Forest Products Association
1619 Massachusetts Avenue, N.W.
Washington, D.C. 20036

Dear Bob:

In reference to your June 8 memo on draft suggestions for changes to the Endangered Species Act and the Eagle Protection Act, I have some comments.

Generally, I have no problems with the changes as proposed. Particularly important is the suggested change in the "harass" clause 10.12. I suspect there may be some enforcement problems involved in determining "intentional" or "unintentional" harassment.

Revisions regarding critical habitat designation (424.02 and 424.12f) and compensation for financial losses (53.12) are good and address some of the problems we have to deal with in this part of the country.

Most people view the Endangered Species Act as applying only to federal lands. However, the ESA directly affects private lands to the extent that we depend upon access across federal lands to intermingled inholdings.

To date, access has not been denied to Company lands solely because of endangered species. However, the process has been delayed considerably because:

1) We are forced to develop long range resource management plans for areas supporting threatened and endangered species on short notice without the benefit of accurate wildlife or timber management data. If these data become available at a later date and indicate that the plan must be revised, extensive inter-agency coordination involving yet another Section 7 consultation must be attempted.

2) Situations involving Company access requests across federal lands supporting threatened or endaugered species are commonly referred to a third agency (USFWS) for Section 7 consultation. Usually a "jeopardy" opinion is rendered and, because the USFWS is somewhat far removed from the area, suggested alternatives are often neither prudent nor reasonable.

These concerns may not be possible to address in the proposed revisions, but you may keep them in mind.

Sincerely,

Lorin L. Hicks
Wildlife Biologist

LLH/[illegible]

Statement

of

ROBERT O. WAGNER

on behalf of the

AMERICAN ASSOCIATION OF ZOOLOGICAL PARKS AND AQUARIUMS

in connection with

Hearings on the Endangered Species Act of 1973

before the

SUBCOMMITTEE ON ENVIRONMENTAL POLLUTION

of the

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

Washington, D.C.

10 December 1981

Mr. Chairman, my name is Robert O. Wagner. I am the Executive Director of the American Association of Zoological Parks and Aquariums (AAZPA) and am appreciative of this opportunity to present comments on the Endangered Species Act of 1973 in behalf of the Association's Board of Directors and our membership.

The American Association of Zoological Parks and Aquariums is the largest professional zoological park and aquarium organization in the world. AAZPA represents virtually every major zoological park, aquarium, wildlife park and oceanarium on the North American continent and the vast majority of the professional staff members employed therein. AAZPA also represents and is the official spokesman for nearly 300,000 members of various zoological park and aquarium support organizations that offer assistance to zoological facilities in their communities. Collectively, zoos and aquariums in this country annually play host to more than 100,000,000 visitors. As such, they draw more visitors than all forms of professional sports combined.

Most of our member institutions have excellent educational programs which provide information on the plight of the growing number of endangered species with which we share this planet. Because of this, our members provide an important service to the general public in behalf of wildlife. We believe that animals displayed in a proper environment in captivity can act as ambassadors for their wild counterparts. This is especially true if the enclosure is arranged in a manner to reflect at least a portion of the animal's wild habitat and is supported by carefully selected educational materials. We accept the responsibility that is ours in providing santuaries for some of the world's most endangered and threatened species. Indeed, there are some endangered species whose continued existence is in the hands of staff members of zoological parks and aquariums.

During the annual Board of Directors meeting of the American Association of Zoological Parks and Aquariums recently held in New Orleans, Louisiana, the Board voted unanimously that the Association do all that it can to support the Endangered Species Act and to maintain the integrity of this landmark legislation. As the Association's chief operating officer, I am proud of our Board of Directors' position on this matter.

In checking the record of the AAZPA regarding testimony during many Congressional hearings since the passage of the Endangered Species Act, I found that in every instance the Association supported the Congressional intent in the passage of that Act. The record also reflects that AAZPA has testified many times upon problems the Association's members were having with various regulatory schemes promulgated by the Department of Interior and its Fish and Wildlife Service. I am very pleased with the progress that has been evidenced by the Fish & Wildlife Service, especially its Federal Wildlife Permit Office, in responding to the concerns expressed by the Association in behalf of its members.

There is no doubt that the Endangered Species Act will come under substantial attack during the reauthorization hearings to be held early next year. Undoubtedly, a vast number of amendments will be offered, and most of them will be attempts by users of endangered and threatened species to weaken various sections of the Act. The pressure that will be brought to bear on members of the United States Congress will be formidable. Our Association urges Congress to do all that it can to cast aside the cries of the special interest groups and to vigorously maintain the complete integrity of the Endangered Species Act. You will hear of some isolated instances in which the Act has caused problems, but I also believe you will hear from many individuals and organizations testifying how the Act has been effective in providing protection to the growing list of endangered and threatened wildlife and the dwindling habitat available to them.

The number of wildlife specimens imported into this country is staggering. It is estimated that the value of legally imported wildlife and wildlife products into the United States exceeds $330 million annually. Please keep in mind that the value of such wildlife is ordinarily representative of a mere fraction of the retail value. It can be assumed that the estimated $330 million wholesale value would grow to considerably more than $660 million retail, if not as much as a billion dollars! Import records reflect that during 1979, the pet industry imported nearly a half million cage birds, almost 150 million tropical fish and approximately a million live reptiles. Any weakening of the enforcement provisions of the Endangered Species Act will undoubtedly cause these figures to rise rapidly.

During the reauthorization hearings, AAZPA will urge the United States Congress to strengthen the criminal penalty provisions in the Endangered Species Act to bring them in line with the recently passed amendments to the Lacey Act. AAZPA strongly supported the Lacey Act amendments and believes that the extant criminal penalty provisions of the Endangered Species Act are entirely too weak to thwart illegal trade in protected wildlife.

The American Association of Zoological Parks and Aquariums has joined a Washington-based coalition of environmental organizations whose major thrust will be to provide testimony during the reauthorization hearings on the Endangered Species Act and to be certain that the Act's extant provisions are maintained or strengthened.

Mr. Chairman and members of the Subcommittee on Environmental Pollution, the AAZPA is pleased that you have organized these hearings to provide you with views as to the impact of the Endangered Species Act from organizations such as ours. I respectfully request that these comments in behalf of AAZPA be included in the record.

Thank you again for this opportunity.

WYOMING ADVOCATES FOR ANIMALS

316 East Pershing Boulevard
Cheyenne, WY 82001
December 16, 1981

The Hon. John B. Chafee, Chairman
Environmental Pollution Subcommittee
Environment and Public Works Committee
Senate Office Building
Washington, D. C. 20510

RE: FOR THE HEARING RECORD - ENDANGERED SPECIES ACT

Dear Senator Chafee:

WYOMING ADVOCATES FOR ANIMALS seeks to place its comments on record for the hearings for the ENDANGERED SPECIES ACT.

WAFA feels the necessity of retaining and reauthorizing the Endangered Species Act is obvious, but enlarges on the theme that it needs reevaluation to be sure it is not weakened or eroded to the point of no value. Any effort to implement weakening amendments would be a disaster.

A healty ecosystem benefits not only the life forms for which the Endangered Species Act expresses concern, but it benefits mankind as well. A healthy ecosystem is a must. There can be no more positive statement than that.

It is perhaps time for Congress to take another look at whether or not it should implement the Act instead of the U. S. Fish and Wildlife Service, which agency appears somewhat reluctant to vigorously implement the Act in all its ramifications.

Some regulations, particularly Section 7 of the Endangered Species Act, have not been promulaged and should be without further delay.

Continued emphasis must be placed before the country and indeed the rest of the planet that vanishing life forms and loss of diversity is something which cannot be countenanced. It, the Act, has lessened the impact on critical species, but not to the extent it should.

Please send to WAFA a copy of the Record. And thank you for including our comments.

Sincerely,

Jeannine R. Stallings
(Mrs.) Jeannine R. Stallings
President

NORTHEAST UTILITIES
THE CONNECTICUT LIGHT AND POWER COMPANY
THE HARTFORD ELECTRIC LIGHT COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
HOLYOKE WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

P.O. BOX 270
HARTFORD, CONNECTICUT 06101
(203) 666-6911

JOHN P. CAGNETTA
VICE PRESIDENT
NUCLEAR AND ENVIRONMENTAL ENGINEERING

March 3, 1982

The Hon. John H. Chafee
Subcommittee on Environmental Pollution
Committee on Environment and Public Works
Dirksen Senate Office Building
Washington, D.C. 20510

Dear Mr. Chairman:

Although Northeast Utilities did not have the opportunity to testify on the reauthorization of the Endangered Species Act, Public Law 93-205, at your subcommittee's recent hearing, I did send you by letter dated December 30, 1981, a copy of certain comments we had prepared on the Act for submission to the Fish and Wildlife Service.

I am now enclosing a copy of testimony we propose to give before the Subcommittee on Fisheries and Wildlife Conservation and the Environment of the Committee on Merchant Marine and Fisheries of the House of Representatives.

We would appreciate having this testimony entered into the record of the Senate proceedings, if possible, and considered in any deliberations of your subcommittee.

Very truly yours,

John P. Cagnetta

JPC:tds
Enclosures

TESTIMONY OF
DR. JOHN P. CAGNETTA
VICE PRESIDENT, NUCLEAR AND ENVIRONMENTAL ENGINEERING
NORTHEAST UTILITIES
BEFORE THE
SUBCOMMITTEE ON FISHERIES AND WILDLIFE CONSERVATION
AND THE ENVIRONMENT
COMMITTEE ON MERCHANT MARINE AND FISHERIES
U.S. HOUSE OF REPRESENTATIVES

March 8, 1982

Introduction

Mr. Chairman, I want to thank you and the members of the Subcommittee for the opportunity to testify today regarding the reauthorization of the Endangered Species Act. My name is Dr. John P. Cagnetta and I am Vice President of the Nuclear and Environmental Division of Northeast Utilities. I am responsible for the direction and supervision of Northeast Utilities' nuclear engineering and environmental programs, including the environmental programs for all of our nuclear, fossil and hydroelectric power plants under construction and in operation.

One of the environmental programs which I oversee includes the most successful fish passage facility for shad and salmon on the Atlantic seacoast. That facility, and some of Northeast Utilities' other successful environmental programs, are described more fully in an attachment to my testimony.

Northeast Utilities is the parent company of The Connecticut Light and Power Company, The Hartford Electric Light Company, Western Massachusetts Electric Company and Holyoke Water Power Company. The system furnishes electric service to approximately one million customers in Connecticut and western Massachusetts, and retail gas service to approximately 150,000 customers in

Connecticut. The companies of the NU system own approximately 5,800 MW of generating capacity located in Connecticut, Massachusetts, New Hampshire, Vermont and Maine, including approximately 2,000 MW of nuclear capacity, 2,600 MW of fossil capacity and 1,200 MW of hydro-electric capacity.

I am here today to propose a single clarification to the Endangered Species Act. This clarification would remove a troublesome contradiction from the Act. That contradiction, which is found in Sections 7 and 9, became evident to Northeast Utilities during the licensing activities for a proposed power plant.

The Problem: The "Double Jeopardy" Risk Under Section 9

Section 7 provides for a consultation process between federal agencies prior to any federal action that might affect the continued existence of an endangered or threatened species or the critical habitat of such species. However, a favorable consultation under Section 7 does not insure that a project will proceed without further risk under the Act.

Under present law, even if the Secretary of the Interior or the Secretary of Commerce has issued a "no jeopardy" opinion regarding a proposed project, the permit applicant proceeds at his peril. A favorable consultation under Section 7 does not free the applicant from the strict prohibitions of Section 9 of the Act. Section 9, which prohibits the "taking" of any endangered species, operates independently of Section 7. Under a literal reading of Section 9, an accidental taking of one egg or larva of an endangered species could be treated as a violation of Section 9, regardless of the outcome of the Section 7 consultation. The mere possibility that a court might interpret Section 9 in this manner may be enough to prevent the appplicant from proceeding at all with its project. In effect, the concern raised by Section 9 renders Section 7 procedures meaningless.

The Remedy

The remedy for this statutory contradiction would be to clarify the Act to provide that any action taken in accordance with an opinion rendered by the Secretary in a Section 7 consultation would be exempt from the prohibitions in Section 9. Later in my testimony I will suggest language that we believe would accomplish this goal.

Our Experience with the Act: The Montague Project

I am here today to describe an example of the problems caused by the lack of coordination between Section 7 and Section 9. This example is based upon a series of incidents that occurred when Northeast Utilities and other New England utilities were planning the construction of a nuclear power plant near the Connecticut River in Montague, Massachusetts.

Northeast Utilities had applied to the Nuclear Regulatory Commission ("NRC") under the Atomic Energy Act for construction permits for the plant. We had also applied to the Environmental Protection Agency ("EPA") under the Clean Water Act for a discharge permit and for approval of the location and design of the makeup water intake structure. Although the NRC nominally has jurisdiction over aquatic impacts under the National Environmental Policy Act, in practice it defers largely to EPA's analysis. Under procedures of the NRC which are designed to inform applicants as early as possible of the suitability of proposed nuclear sites, we had also applied to the NRC for an early "site suitability" ruling. We had hoped to obtain a definitive finding from all of the agencies having jurisdiction that the Montague site was an acceptable site from an environmental point of view.

The makeup water intake structure for the Montague plant was to be located on the Holyoke Pool of the Connecticut River. During our aquatic studies, it was determined that the Shortnose Sturgeon was present in the Holyoke Pool. This species has been on the endangered species list since 1967. However, the plant was to be built with cooling towers and other equipment which would employ state of the art technology to minimize impact on the river, and we believed that it was very unlikely that there would be any adverse effect on the Shortnose Sturgeon population.

Nevertheless, early in its review of our application under the Clean Water Act, EPA began to develop the troublesome position that brings us here today. While we disagree with the position taken by EPA in the Montague proceeding, we recognize that EPA's position was the product of a good-faith effort to administer a statute which, by its own terms, absolutely prohibits "takings."

The application was being reviewed by the Power Plant Review Group based at the EPA's Region I office in Boston. In 1977, the Power Plant Review Group sent the Montague applicants a letter containing the following statement:

> The Power Plant Review Group has recommended that EPA disallow any intake structure in the Holyoke Pool, pursuant to EPA's responsibilities under the National Environmental Policy Act, 42 U.S.C. § 4321 _et seq._, and the Endangered Species Act, 16 U.S.C. §1531 _et seq._, because of the potential impact that an intake structure would have on the Shortnose Sturgeon. _Since this species is on the endangered list, EPA cannot issue a permit authorizing the taking of the species._ If the applicant opposes this recommendation, _a detailed showing of proof that no sturgeon (adult, larvae, or eggs) will be taken as a result of the operation of the proposed intake structure is required_ (emphasis added).

This position was reiterated in a letter sent to the Montague applicants in 1978 which contained the following statement:

> Concerning the possibility of Shortnose Sturgeon mortalities, it is still the power plant review group's position that no intake structure can be allowed in the Holyoke pool because of predictable egg and larva entrainment. This question has been certified to EPA's Office of General Counsel for advice.

The "certification" referred to in the EPA letter was actually a request for an advisory ruling from EPA's Office of General Counsel in Washington on the applicability of the Act to EPA permit determinations. In a later letter to the Montague applicants, the Region I Office of EPA indicated that the question on which it was seeking the advisory ruling was as follows:

> Must EPA, in making 316(b) and other NPDES determinations for the Montague facility, a new source, refuse to license the facility at the proposed location if the Agency concludes that licensing the proposed activities will result in the taking of Shortnose Sturgeon, an endangered species? The issue is whether a predictable reduction in an endangered species caused by an intake structure constitutes a "taking" under the Endangered Species Act and further, whether the "taking" prohibition in the Act applies to EPA's permiting action here. I am requesting your opinion because such an interpretation has implications for siting of facilities other than the project we are presently reviewing.

To our knowledge, no formal advisory ruling was ever received from EPA's Office of General Counsel, although the Region I office apparently did receive preliminary informal advice that its position on Section 9 may have been somewhat extreme.

About the same time that this correspondence with EPA took place, the NRC and EPA initiated a Section 7 consultation with the National Marine Fisheries Service ("NMFS") to determine whether the operation of the Montague plant would jeopardize the continued existence of the Shortnose Sturgeon or result in the destruction or adverse modification of its critical habitat. However, by this time it was clear from discussions and correspondence with EPA that it had already drawn two conclusions. First, EPA had concluded that Section 9 of the Act constituted a "zero taking" rule which would prohibit the entrainment or impingement of any Shortnose Sturgeon eggs, larvae or adults by the Montague intake structure. Second, EPA had determined that it had serious doubts about whether it could issue any approvals under the Clean Water Act, regardless of the outcome of the Section 7 consultation, if the activity being authorized would result in "takings" which were prohibited under its strict reading of Section 9 of the Act.

Several months later, the consultation process with NMFS bogged down in a series of requests for burdensome studies. Those studies were not performed primarily because we believed that such expensive and time-consuming efforts could not be justified in light of EPA's position on Section 9. If EPA felt that Section 9 was a bar to the approval of our application under the Clean Water Act, the outcome of the Section 7 consultation was obviously irrelevant. The consultation was never completed.

The licensing effort for the Montague plant was finally suspended in mid-1978. There were a number of reasons for this suspension. These included financial constraints, a decline in the demand for power and difficulties in commencing a joint hearing between the NRC and the Massachusetts Energy Facilities Siting Council, as well as the problems which we had encountered in resolving the Shortnose Sturgeon issues. We believe that the uncertainty about the operation of Section 7 and Section 9 was a significant factor in our failure to obtain a ruling on the suitability of the Montague site.

The Montague plant was cancelled in 1980. Although the Montague site still remains a prime location for an electric generating station, its use for that purpose is severely limited due to the presence of the Shortnose Sturgeon and uncertainty about the application of the Act.

The Lessons of Montague

Looking back on the Montague experience, the positions taken by EPA in 1977 and 1978 are instructive for two reasons. First, EPA's interpretation of Section 9 requires an applicant to prove a negative. Because EPA read Section 9 as a "zero taking" rule, if we wanted EPA's approval under the Clean Water Act we had to demonstrate that we would never entrain a single egg or larva or impinge a single adult. Obviously, it is impossible to make such a showing.

Second, the EPA position rendered the Section 7 consultation process meaningless. EPA had serious doubts about whether it could approve an activity which would result in "takings" under its strict reading of Section 9. If EPA felt that it could not issue any approval due to Section 9 even if we had obtained a favorable Section 7 consultation, then the consultation would be a pointless ritual.

The Double Jeopardy Risk

Our problems with the Act transcend our experiences with EPA. The "double jeopardy" risk was our overriding concern. Even if we had obtained a "no jeopardy" opinion from NMFS in the Section 7 consultation, and even if EPA had approved our intake structure, and even if the NRC had issued a construction permit and later an operating license, Section 9 would have continued to haunt us. Once the plant was fully built and operational, at a cost in excess of two billion dollars, a private party might bring suit to enjoin the operation of the plant on the grounds that it would cause a violation of Section 9. We simply could not afford that risk.

This "double jeopardy" concern is not unfounded in light of the absolutist ruling of the U.S. Supreme Court in TVA v. Hill, 437 U.S. 153 (1978), the famous snail darter case. The Court there held that in considering whether to issue an injunction to enjoin a violation of Section 7, a balancing of costs and benefits is not permitted. The Court stated that Congress meant exactly what it said. The plain language of the Act prohibits federal action that would jeopardize the continued existence of an endangered species or result in the destruction of its critical habitat.

No subsequent case interpreting Section 7 or Section 9 has been decided by the Supreme Court. However, the language of Section 9 is framed in even more absolute terms than the language of Section 7. Accordingly, even if we obtain a favorable Section 7 consultation, we cannot be confident that, if a lawsuit were filed alleging a violation of Section 9, a court would balance the equities and refuse to enjoin the operation of a completed power plant.

The Act Offers No Reasonable Alternative

There is no reasonable alternative course open to a utility faced with a Section 9 problem. The deepest fear is that a court might issue an injunction against the operation of a plant because an isolated or inadvertent "taking" had occurred in violation of Section 9. Even worse, an injunction might be issued, wrongly we believe, just because the utility couldn't prove that a Section 9 taking would not occur. With new large central station generating facilities costing billions of dollars, utilities simply are not able to assume such risks.

We have been told in discussions with NMFS that the government would not prosecute an alleged violation of Section 9 if an applicant had obtained a "no jeopardy" opinion under Section 7. We have also seen a memorandum prepared by the Associate Solicitor of the Department of the Interior which expresses the view that an implied exemption from Section 9 arises following the receipt of a "no jeopardy" opinion under Section 7.[1] While we commend these reasonable positions, reliance on a government interpretation or policy is not a reasonable alternative for a utility which is considering a multi-billion dollar investment. A third party could go to court, despite the government's position, to seek the relief that even the government believes is inappropriate. Moreover, the government's position on these issues would not be binding on a court.

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[1] See Memorandum dated December 30, 1981, from Associate Solicitor, Conservation and Wildlife, to Associate Director, Federal Assistance, Fish and Wildlife Service.

Another alternative would be to go through the exemption procedure added by the 1978 amendments to the Act. Following an unfavorable Section 7 consultation, an applicant can now apply for an exemption from the Endangered Species Committee. If the exemption is granted, any activity which is necessary to carry out the approved activity will also be exempt from the prohibition against taking in Section 9. (See Section 7(o) of the Act.) This provision helps to highlight one of the anomalies between Section 7 and Section 9 of the Act. Any activity for which a Section 7 exemption is granted is also exempt from Section 9. Yet, in order to apply for the Section 7 exemption, an applicant must first obtain an unfavorable Section 7 consultation. On the other hand, in cases where a favorable Section 7 consultation is obtained, there is no immunity whatsoever to Section 9. Congress could not have intended this contradictory result.

Furthermore, the exemption procedure is extremely burdensome and involves extremely strict standards. The exemption procedure takes place at three different levels, culminating in a ruling by a specially appointed, Cabinet-level committee. Only two projects have gone through this procedure, and only one was granted an exemption. No applicant can anticipate success.

The Prohibition Contained in Section 9 is Unnecessary Following Favorable Consultation

The prohibition in Section 9 is unnecessary in those situations in which a favorable Section 7 consultation has been obtained. The consultation process is sufficient to prevent the extinction of an endangered or threatened species or the destruction or adverse modification of its critical habitat. Section 9 only adds a heavier burden that may penalize an applicant which has complied in good faith with Section 7. An incidental and inadvertent taking will not threaten the survival of most endangered species. It may, however, needlessly penalize the owners of useful facilities and their customers.

Furthermore, under our proposal, where no Section 7 consultation has been obtained because there is no federal involvement in the activity in question, Section 9 would remain fully operative.

Conclusion

If the Secretary issues a "no jeopardy" opinion in connection with a proposed project, that project should be permitted to proceed without further risk under Section 9 of the Act. Similarly, if the Secretary suggests "reasonable and prudent alternatives" to the proposed course of action pursuant to Section 7(b) of the Act, and the applicant agrees to adopt one of those alternatives, the project should not be subject to further risk under Section 9 of the Act. We believe our proposed amendment meets these goals and would eliminate the inherent contradiction between Sections 7 and 9.

Accordingly, we propose that the present Section 7(o)[16 U.S.C. §1536(o)] of the Act be deleted and that the following be substituted in its place:

> Notwithstanding Sections 4(d) [16 U.S.C. §1533(d)] and 9(a) [16 U.S.C. §1538(a)] of the Act or any regulations promulgated pursuant to such sections, (i) any action for which an opinion has been rendered pursuant to Section 7(b)[16 U.S.C. §1536(b)] which concluded that such action is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of the critical habitat of such species, (ii) any action recommended by the Secretary pursuant to Section 7(b) [16 U.S.C. §1536(b)] as a reasonable and prudent alternative or (iii) any action for which an exemption is granted under Section 7(h)[16 U.S.C. §1536(h)] of this Act, shall not be considered a taking of any endangered or

> threatened species with respect to any activity which is necessary to carry out such action.

It should be noted that our proposed amendment merely builds on the exemption from Section 9 which already exists in Section 7(o) of the Act. Thus, our approach would allow the contradiction between Section 7 and Section 9 to be eliminated without requiring any changes in other parts of the Act.

Thank you for allowing me to testify here today.

NORTHEAST UTILITIES

A Summary of Significant Environmental Programs

Northeast Utilities and its subsidiary companies, The Connecticut Light and Power Company ("CL&P"), The Hartford Electric Light Company ("HELCO"), Western Massachusetts Electric Company ("WMECO"), and Holyoke Water Power Company ("Holyoke"), have long recognized the need for environmental awareness and responsibility.

Some examples of Northeast Utilities' accomplishments in environmental protection and in the propagation of fish and wildlife follow:

*Holyoke completed construction of the most successful upriver shad passage facility along the Atlantic seacoast in 1955 at Holyoke, Massachussetts. Holyoke had begun experimenting with methods to lift the American shad over the Holyoke Dam in the 1950s. After several experiments, a fish elevator was built that lifts the shad more than 50 feet, then releases them above the dam. Annual use of this facility has grown from 5,000 shad in 1955 to 347,000 shad in 1981. More than 300 Atlantic salmon were also lifted and captured at the Holyoke fishlift in 1981 by fisheries agencies. The salmon capture was especially significant as part of a federal program to restore historic salmon runs to the Connecticut River.

Holyoke was awarded the U.S. Department of Interior's Conservation Service Award in 1956 for the successful development of the Holyoke fishlift. This was the first time the Department of Interior's Conservation Service Award was given to a corporation.

*Northeast Utilities recently developed a system that assists American shad to migrate downstream at the Boatlock Station hydroelectric plant in Holyoke. This experimental system, which is the first of its kind in the United States, herds and diverts the shad around the Holyoke Dam.

*A three-fishladder complex was completed at Turners Falls, Massachusetts, in 1980. Northeast Utilities, in cooperation with state and regional fisheries agencies, built the complex, which opens an additional 30 miles of river to American shad and Atlantic salmon. The fish ladders permit shad and salmon to swim upstream in increments of about one foot at a time.

*Northeast Utilities has designed and developed the most sophisticated data acquisition network of any utility in the

United States. Meteorological towers record data every few seconds, 24 hours per day, on wind speed and direction, light intensity and sulfur dioxide levels at every major Northeast Utilities plant site. Underwater monitors track water temperature and pH levels. This data is fed by telephone lines into a computer at Northeast Utilities headquarters in Berlin, Connecticut, where it is used to insure compliance with federal and state agency requirements. Northeast Utilities was the first utility in the country to have a completely automated data gathering system.

*Long-term ecological monitoring has been underway at the Millstone Point nuclear power station on Long Island Sound since 1968. Independent research is carried out to study plankton, benthos, fish and terrestrial ecology. Northeast Utilities maintains a full-time staff of 28 scientists and technicians at the Millstone Point site to conduct these studies. Initiated by Northeast Utilities in 1968, these studies were incorporated as conditions of the plant's operating licenses and discharge permits in 1973.

*A unique fish barrier was constructed at the outlet of a thousand-foot discharge quarry at Millstone Point to minimize thermal stress on fishes. Northeast Utilities voluntarily developed and erected this "venetian blind" type barrier, which has proved very effective.

*Three special nesting platforms were constructed on the Millstone Point site over the past 10 years to protect and encourage the propagation of the American Osprey, which is a rare bird in the Northeast. Osprey were nesting on an old derrick at the former Millstone quarry site, and Northeast Utilities built the first platform as a substitute when the derrick was removed. The first nesting platform proved so popular, two more were built. Thirty-two of the 192 osprey known to have been born in Connecticut over the past 10 years were born in these nests.

*When Connecticut shoreline residents grew concerned over a spreading problem with eelgrass, a locally abundant sea grass, Northeast Utilities voluntarily awarded a research contract to the University of Connecticut to determine the cause. The study concluded that the problem was the result of natural phenomena, not the operation of the Millstone plant.

*A four-year research program to examine the potential benefits of waste heat in condenser cooling water was initiated in 1976. An experimental research facility was established at the Millstone plant to explore the use of the heated discharge for aquaculture, i.e., the farming of shellfish. Scallops had been a traditional harvest in the area. In response to local and state interest, laboratory rearing techniques for scallops were developed and seeding experiments were conducted.

*The winter flounder was also the subject of extensive Millstone Point studies. Northeast Utilities supported the development of a computer-based mathematical model designed to simulate the effect of the three Millstone units on the winter flounder. The model, completed under the direction of scientists at the University of Rhode Island, was one of the first to combine both hydrodynamic and life history factors in order to predict the changing effects on a species over the life of a power plant.

*An elaborate bioassay program has been established at Millstone Point using approved EPA procedures to investigate the short- and long-term effects of effluents on Long Island Sound organisms. Northeast Utilities initiated this program because it believed the results would be scientifically useful in the future. In fact, studies to date have shown that there is no short- or long-term toxicity associated with the Millstone Point discharge. No outside agency required the program.

*At the Connecticut Yankee atomic power station, Northeast Utilities undertook a milestone ecological study from 1965 to 1972 on the possible impacts of the power plant on the Connecticut River. The report focused on the impact of the thermal discharge on benthic organisms and resident and anadromous fishes. This study was the first in-depth exploration of the impact of a power plant on a river. It was chosen by the American Fisheries Society to be the subject of its first published monograph.

*Northeast Utilities owns and operates over 800 acres of recreational facilities at the Northfield Mountain Pumped Storage Project in Northfield, Massachusetts. Ten naturalists and rangers as well as seasonal assistants staff the facilities. Northfield provides approximately 25 miles of trails which can be used for cross country skiing, horseback riding or hiking. The cross country skiing program includes instruction, rental equipment, grooming and nordic ski patrol. Other activities include an interpretative river boat ride, camping at Bartons Cove or Mums Ferry and year round naturalist programs. This year, Northfield was host to the U.S. Olympic cross country ski team.

These studies and projects are only a portion of Northeast Utilities' accomplishments in the area of environmental protection.